

**201~~32~~ SOUTH CAROLINA SCHOOL FACILITIES  
PLANNING AND CONSTRUCTION GUIDE**

**Prepared by  
OFFICE OF SCHOOL FACILITIES**

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**SOUTH CAROLINA DEPARTMENT OF EDUCATION**

**Mick Zais, Ph.D.**

**State Superintendent of Education**

**An Equal Opportunity Agency**

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*These regulations are updated on an annual basis. Public comments are welcomed. Your submittal must be written. It will be directed to the appropriate subcommittee for consideration. All submittals need to be received no later than March of the year to be considered by both subcommittee and the South Carolina Public School Facilities Committee for inclusion in the South Carolina School Facilities Planning and Construction Guide of the following year. Any entries beyond this deadline may not be timely for proper review for that year and will be deferred to the next year.*

Please submit comments in written form either by mail or e-mail addressed to:

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## DIVISION 1

### GENERAL REQUIREMENTS

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#### SECTION 102 AUTHORITY

~~102.1~~ Section 59-5-60, Code of Laws of South Carolina, 1976, gives the State Board of Education authority to adopt policies, rules, and regulations for the conduct and furtherance of the public school program in South Carolina. Such policies, rules, and regulations as herein adopted are deemed to have the effect of law.

~~102.12~~ South Carolina Code Ann. §59-23-210 (Supp. 2009) requires all construction, improvement and renovation of public school buildings and property to comply with the latest standards and specifications set forth in the South Carolina School Facilities Planning and Construction Guide and allows the latest standards for construction and renovation of public schools to be published by the State Department of Education. A committee appointed by the State Department of Education annually updates this publication. It also requires that plans and specifications receive approval before bidding.

~~102.23~~ South Carolina Code Ann. §59-23-220 (Supp. 2009) requires the State Superintendent of Education or the superintendent's designee inspect all public school buildings before occupancy.

~~102.34~~ Section 6-9-110, Code of Laws of South Carolina, 1976, exempts school district facilities, reviewed and approved by the State Department of Education, from county, municipal or other local ordinances or regulations which require the purchase or acquisition of a permit, license, or other device utilized to enforce a building standard. However, it does not exempt the district from zoning ordinances.

## SECTION 103 ACRONYMS AND DEFINITIONS

<b>A/E</b>	The architect and/or engineer of record for a given project
<b>AGA</b>	American Gas Association
<b>AHERA</b>	Asbestos Hazard Emergency Response Act
<b>AIA</b>	American Institute of Architects
<b>ANSI</b>	American National Standards Institute, Incorporated
<b>ASHRAE</b>	American Society of Heating, Refrigeration & Air Conditioning
<b>ASME</b>	American Society of Mechanical Engineers
<b>ASTM</b>	American Society for Testing and Materials
<b>AWWA</b>	American Water Works Association

**Building Codes** are the applicable standards and specifications set forth in the *International Building Code*, *International Plumbing Code*, *International Mechanical Code*, *International Gas Code*, *International Fire Code*, *International Existing Building Code* and successor codes promulgated by the International Code Council; the *International Energy Conservation Code*, as published by the Council of American Building Officials; and the *National Electrical Code* as published by the National Fire Protection Association, with deletions or additional standards specified in the *South Carolina School Facilities Planning and Construction Guide* and the *South Carolina Minimum Specifications Guide for Relocatable Classrooms*, which are published by the South Carolina Department of Education. Applicable editions or revisions ~~shall~~must be as set by the State Department of Education at the time of plans submittal.

<b>CABO</b>	Council of American Building Officials
<b>CAD</b>	Computer Aided Design
<b>CEFPI</b>	Council of Educational Facility Planners International
<b>Code</b>	See Section 107

**Construction Document Phase** consists of the final drawings, specifications and bidding documents.

**Construction** is the means of the creation of something new, rather than repair or improvement of something existing.

<b>CM/PM</b>	Construction Management/Program Management
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**Design Development Phase** is the preparation of detailed preliminary drawings along with supporting data. Note that this term, as used herein, is not intended to be all-inclusive as defined in some AIA documents in that development of structural, plumbing, mechanical and electrical elements are not required at this stage.

<b>DHEC</b>	South Carolina Department of Health and Environmental Control
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**District** Delegated authorities of the applicable school district

**DOT** South Carolina Department of Transportation

**FEMA** Federal Emergency Management Agency

**Final Completion** is the date when the architect declares that all work has been completed, all deficiencies corrected, and everything is acceptable in accordance with the contract documents.

**IBC** International Building Code

**IEBC** International Existing Building Code

**IECC** International Energy Conservation Code

**IES** Illuminating Engineering Society

**IFC** International Fire Code

**IFGC** International Fuel Gas Code

**IL** Inspection Log

**IMC** International Mechanical Code

**Implied Method of Construction** This regulation is written throughout as if construction, when referred to or implied, is to be by the single contract method. Specific mention is made in one area of each of Divisions 7, 8, and 9 concerning the multiple prime contracts method of construction (construction management), construction by a school district, and “fast track” construction.

**IPC** International Plumbing Code

**LEED** Leadership in Energy and Environmental Design (LEED) /Other High Performance Standard Certification

**LLR** Labor, Licensing, and Regulation

**NFPA** National Fire Protection Association

**OSF** Abbreviation for the Office of School Facilities, South Carolina Department of Education

**OSHA** Abbreviation for the Occupational Safety and Health Administration

**PE** Physical Education

**Renovation** is the means of the repair or improvement of something already existing (S.C. Attorney General Opinions, 1954 and 1968).

**Schematic Design Phase** is a study by the architect of the project requirements, followed by the preparation of schematic design drawings with supporting data as outlined herein.

**Substantial Completion** is the date all work or some designated portion, thereof, is certified by the architect as being sufficiently complete, in accordance with the contract documents, so that people may safely occupy the workspace or a designated portion, thereof, for the use for which it is intended.

**T & I** Trade and Industrial

**UL** Underwriters Laboratories, Incorporated

## **SECTION 104 CLASSIFICATIONS OF SCHOOLS**

**104.1** Throughout this regulation, the terms “elementary” or “secondary” as applied to schools ~~shall~~must be defined as follows:

**104.1.1 Elementary:** Includes schools with any combination of grades, from pre-kindergarten through grade 5 or through grade 8 when housed with grades K–6

**104.1.2 Secondary:** Includes middle, junior high, and senior high schools

**104.2** Charter schools are public schools and ~~shall~~must be subject to the OSF plan review and inspection of construction or renovation and approval of occupancy, in order to ensure compliance with all codes as set forth in this division. Charter schools are subject to building code and all health and safety standards as stated in this *Guide*. Requirements that are not related to health and safety that are listed in this *Guide* do not apply to charter school facilities. A listing of the non-health and non-safety requirements of this *Guide* is maintained by the OSF and is published on the OSF's website. Inspections by jurisdictions other than the OSF may be allowed if approved by the OSF.

## **SECTION 105 SCOPE OF OSF RESPONSIBILITY**

The following are included within the requirements of this regulation and, therefore, are under the jurisdiction of the OSF regardless of the source of funding for the project.

**105.1** Site inspections and approval prior to acquisition

**105.2** All new structures, and additions and/or renovations or alterations to existing structures, in connection with the public education program in South Carolina, including student-related as well as non-student-related facilities

**105.3** Existing school buildings once vacated and being placed back in service

**105.4** Any existing building to be converted to an educational occupancy

**105.5** Adjunct work related to the following facilities whether included as a part of an overall construction contract or awarded as a separate contract, unless otherwise waived by OSF

**105.5.1** Site work and associated construction, including grading, paving, storm drainage, utilities, athletic facilities, stadiums and bleachers, press boxes, playing field lighting, and concession stands

**105.5.2** Water supply and sewage disposal systems

~~105.5.3 Building fire suppression sprinkler systems are to be submitted to the State Fire Marshal's Office for review and approval. Submittal, whether during design or construction, is determined by the A/E.~~

**105.5.34** Fixed equipment where plumbing, mechanical, or electrical systems, and/or the building structure must be modified such as security systems, technology systems and ~~(as in the case of~~ kitchen or science equipment.)

~~105.5.5 Any project in which asbestos mitigation or other hazardous material is involved and is, therefore, subject to AHERA and DHEC regulation~~

**105.5.46** Energy conservation equipment installations under energy savings contract when mechanical, electrical, and/or structural modifications are involved

**105.5.57** Roofing projects when the membrane material is changed

**Exceptions:**

The following are not included within the requirements of this regulation.

**105.5.6** ~~A. Contracts for Carpet, curtains, furniture~~furnishings and portable equipment (such as for classroom and library furnishings, vocational shop equipment, etc.) not provided as a part of a construction or renovation project are excluded from the requirements of this regulation. The District is responsible for ensuring that all carpet, curtains, furniture and portable equipment meet the building code requirements for smoke development, flammability and flame spread for the location. The OSF is available to answer any questions the District or their vendors may have to determine material suitability, and are a district responsibility.

**105.5.7** ~~B. The design and construction of "relocatable" classroom units are excluded from the requirements of this regulation and are~~ addressed in the Department of Education document South Carolina Minimum Specifications Guide for Relocatable Classrooms.

~~C. Charter schools are subject to the OSF review and inspection for building code compliance.~~

~~105.6.607.1~~The OSF will review for compliance with applicable building codes and regulatory or statutory requirements. Review of building code and regulatory or statutory requirements by the OSF shall~~must~~not relieve the design professional representing the district from code omissions as interpreted by the OSF.

~~105.6.1607.2~~Plan reviews may be done on a personal basis with the design professional, on~~by~~request. In most cases, it will be possible to accomplish the review by telephone. Should a meeting be necessary for a plan review, s~~School~~district representatives shall~~must~~be invited to attend such meetings.

~~607.3 After each review, a decision will be made as to the necessity of further resubmittal of corrected plans. This will depend on the complexity of the job and the changes required.~~

~~105.6.3607.4~~After completing the review of design development drawings, verbal~~written~~authorization will be given by the OSF to the District and copied to the design professional to proceed into the construction documents phase. The design professional assumes responsibility for any changes required if design~~all corrections required by the OSF if he proceeds without such~~authorization.

**SECTION 106 SCOPE OF DISTRICT RESPONSIBILITY**

Place holder for future discussion

106.1 Procurement of design, construction and inspection services

106.2 Review and approval of program, budget, schedule, plans and specifications.

106.3 Coordination of work contracted directly with district – furniture, road improvements, utility relocation, IT, telephone, security

106.4 Permits – application and cost

106.5 Asbestos and hazardous material testing, abatement plan and abatement.

106.6 Operational plans – fire safety and evacuation, full and modified lockdown, shelter in place

## **SECTION 106107 PROFESSIONAL SERVICES SCOPE OF DESIGN PROFESSIONAL RESPONSIBILITY**

**106107.1 Design Professionals:** There ~~shall~~must be a design professional whose responsibility is to coordinate all design requirements throughout the entire construction project. This professional ~~shall~~must be an architect and/or engineer registered to practice in South Carolina and ~~shall~~must be designated as the prime contact for the OSF.

**106107.1.1** In certain types of projects, the principal design professional may be an engineer rather than an architect. For such projects, within the bounds of this *Guide*, where the term “architect” is used, it may refer instead to the principal design professional for the project.

**106107.2 Other Design Professionals:** Where the scope of a project is not architectural or engineering in nature, the services of an architect/engineer are not required and the basic services of other design professionals may be used. These professionals ~~shall~~must be under direct contract to the district. The preceding applies to professionals, such as landscape architects, roofing consultants, and kitchen planners acting as independent practitioners whose credentials are recognized by the OSF.

**106107.3 Construction/Program Management (CM/PM):** Districts may employ a CM/PM as their agent. Contracts vary widely with regard to CM/PM project responsibilities. Regardless of the defined contractual responsibilities, the CM/PM ~~shall~~must be an architect or professional engineer registered in South Carolina or a South Carolina licensed general contractor (building classification) with a cost of work limitations not less than the construction cost of the project.

**106107.4 Incidental Work:** By joint resolutions of the South Carolina Architectural Registration Board and the Engineering Examiners’ Board, dated July 25, 1962, it is permissible for an architect to perform work in the field of engineering if it is incidental to his practice of architecture, if it is of a minor nature and if he is qualified to perform the work. Conversely, professional engineers may perform incidental work in the field of architecture under the same conditions.

**106107.5 Construction by a School District:** A district may undertake small construction or renovation work using their own maintenance forces, or with vocational student or sub-contractor assistance. Note that under certain conditions licensure from the S.C. Contractors Licensing Board is required.

**106107.5.1** Drawings or a scope of work ~~shall~~must be submitted and prior approval first obtained from the OSF.

**106107.5.2** Complete architectural and/or engineering services ~~shall~~must be required unless otherwise waived by the OSF.

**106107.5.3** ~~Third party inspections will be required for all work. The district shall identify a qualified, licensed construction superintendent in accordance with the paragraph.~~

**106107.5.4** A district may engage in a contracting project up to \$350,000 for general contracting and \$125,000 for mechanical, plumbing, or electrical contracting, and \$5,000 for asphalt paving contracting. The district must employ a certified party qualified in the classification of work that is to be performed (South Carolina Code Ann. § 40-11-230 and South Carolina Code Ann. § 40-11-360 {A}{8}) and submit the name of the party to the OSF for approval prior the start of construction. The certified party may be an employee of the District or contracted for the work.

**106107.5.5** The “cost of the work” ~~shall~~must be determined by the cost of all materials, labor, subcontracts, and any other direct expenses. This estimated cost may be determined by a detailed estimate prepared by the district or may be estimated by the OSF based on current square foot cost of school construction, adjusted for any anticipated savings.

**106107.6 When Professional Services Are Not Required:** The services of professional and specialists mentioned in items preceding are not normally required in the following situations (exceptions are noted). It is incumbent upon the district to ascertain that the work complies with applicable codes when professional services are not used.

**106107.6.1** For very small projects or projects of sufficiently limited scope, if the OSF agrees that the scope of the project does not justify the use of such professionals or specialists mentioned above. In such cases, the district ~~shall~~must submit prior written request for waiver; use Form F1 “Request for Waiver from Use of Professional Services” in Division 13 of this *Guide*.

**106107.6.2** For minor renovation or alteration work where building codes, laws, or regulations are not involved, or for work that is cosmetic in nature (painting, etc.), or for work which is of a routine maintenance nature.

**106107.6.3** Reroofing projects when no weight is added, the drainage does not change and the roofing membrane remains essentially the same as the existing roof.

107.6.4 Professional services may not be required for demolition projects. However, surveys for hazardous materials are required before demolition and those surveys or mitigation may require professional services. Please contact the OSF if clarification is required.

~~106.6.4 Carpeting, code requirements for flammability must be met~~

**106107.6.5** Locker installations must comply with minimum corridor widths defined in this regulation.

**106107.6.6** For auditorium seating or folding gymnasium seating installations, the successful bidder ~~shall~~must submit drawings and specifications to the OSF for prior approval, along with certification by the manufacturer that all applicable code requirements have been met.

**106107.6.7** For prefabricated walks and canopies, or prefabricated spectator bleachers for outdoor athletic facilities, the successful bidder ~~shall~~must submit drawings and specifications to the OSF for prior approval. Furthermore, a structural engineer registered to practice in South Carolina ~~shall~~must be retained by the successful bidder to approve and stamp the drawings and specifications and to

certify by letter that all applicable code requirements have been met. The engineer may be in the employ of the manufacturer of the units if he meets the above registration requirement.

~~106.7 Re-occupied Buildings: Buildings that have been out of use for two years or greater must be brought up to code as a new building before they are re-occupied.~~

## **SECTION 108 INSPECTIONS**

108.1 Required inspections must be performed by inspectors approved by the OSF.

108.2 The scope of both Chapter 1 and Chapter 17 inspections must be determined by the design professional team in conjunction with the district and the OSF.

108.3 The Inspector is responsible for inspecting work for compliance with the code as represented on the design documents.

108.4 The Inspector must advise the owner, design professional and the contractor of all code related deficiencies.

108.5 The Inspector must submit periodic deficiency logs on a schedule specified by the OSF.

108.6 The OSF, as the Authority Having Jurisdiction, must make the final determination of any code interpretation.

## **SECTION 109~~7~~ BASIC CODES AND STANDARDS**

**109~~7~~.1** In accordance with SC Code Ann §§ 1-34-10 thru 70, the OSF has adopted the following codes with all SC modifications as adopted by the SC Building Codes Council:

**109~~7~~.1.1** International Building Code (IBC), 2006 Edition,

**109~~7~~.1.2** International Existing Building Code (IEBC), 2006 Edition,

**109~~7~~.1.3** International Fire Code (IFC), 2006 Edition,

**109~~7~~.1.4** International Energy Conservation Code (IECC), 2006 Edition,

**109~~7~~.1.5** International Fuel Gas Code (IFGC), 2006 Edition,

**109~~7~~.1.6** International Mechanical Code (IMC), 2006 Edition,

**109~~7~~.1.7** International Plumbing Code (IPC), 2006 Edition, with the following insertions:

107.1.7.1 Section 305.6.1, insert "24" and insert "24"

107.1.7.2 Section 904.1, insert "8"

**109~~7~~.1.8** International Private Sewage Disposal Code (IPSDC), 2006 Edition,

**109~~7~~.1.9** International Property Maintenance Code (IPMC), 2006 Edition,

**109~~7~~.1.10** International Residential Code for One and Two Family Dwellings (IRC), 2006 Edition, with the following insertions:

107.1.10.1 P2603.6.1, insert "12" and insert "24"

**1097.1.11** International Wildland – Urban Interface Code (IUWIC), 2006 Edition, Note: The IUWIC does not supersede existing statutory requirements.

**1097.1.12** National Electrical Code (NEC) [NFPA-70], 2008 Edition

~~**107.1.13** National Fire Alarm Code [NFPA-72], 2007 Edition~~

**1097.1.134** National Electrical Safety Code, ANSI-C2-2007 Edition

**1097.1.145** ASCE 7—2005

**1097.1.156** ASHRAE 62, as referenced by ICC Codes latest edition

**1097.1.167** ASHRAE 90.1, as referenced by ICC Codes latest edition

**1097.1.178** Latest edition of the American National Standards Institute, Inc. (ANSI) document A117.1, Accessible and Useable Buildings and Facilities. Note that this standard is the standard adopted by the South Carolina Accessibility Act but this requirement does not relieve the District or the design professional from the Federal Statutory requirements that design and construction comply with the Americans With Disabilities Act Accessibility Guidelines for Buildings and Facilities. See <http://www.access-board.gov/ada/>

**1097.1.189** State Fire Marshal rules, regulations, and policies. See <http://www.scfiremarshal.llronline.com/EngServices/index.asp?file=AdoptedStandards.htm>

**1097.1.1920** South Carolina Elevator, Code, & Regulations.1: See <http://www.llronline.com/elevators/index.asp?file=laws.htm>

**1097.1.201** The SC Elevator code references the American Society of Mechanical Engineers Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks, and supplements thereto, ASME A17.1.

**1097.1.212** International Code Council Performance Code (ICCPC), 2006 Edition, upon Director of OSF written approval.

**1097.1.223** Governors Executive Order No. 82-19 (April 1982) – State of SC Building Standards in Floodplain Areas and compliance with the criteria in Title 44, Code of Federal Regulations, Parts 60.3 and 60.5. See <http://www.gpoaccess.gov/cfr/index.html> . Copies of these Parts are available from the State Coordinator’s Office for the National Flood Insurance Program (NFIP).

**1097.1.234** The South Carolina Modular Buildings Construction Act S.C. Code § 23-43-10 et. Seq.

**1097.1.245** See Section 11~~33~~ for School Bus Safety requirements.

**1097.1.256** See Section 11~~309~~ for reference to OSHA standards

**1097.1.267** See Section 11~~32~~ for reference to DOT standards

~~**109.2605.1.6.1.1** The date of the building code and amendments thereto. The adopted codes and standards in effect at the time of the initial submittal (design development or schematic), shall must establish code requirements for the remainder of the project, including the construction phase.~~

**109.3 Alternative Means and Methods:** The OSF has the authority to accept alternative methods of compliance within the intent of these regulations, after finding that the materials and method of work offered is for the purpose intended, at least the equivalent of that prescribed in these regulations in quality, strength, effectiveness, fire resistance, durability, and safety. The OSF must require sufficient evidence or proof be submitted to substantiate any claim that may be made regarding use of alternative. All requests for acceptance must be supported by and submitted by a South Carolina registered design professional.

#### **1097.42** Resolutions of Conflicts

**1079.42.1** Where state statutes are at variance with the adopted codes or standards or other provisions of this document and this regulation is silent, the most stringent requirements ~~shall~~must govern. The architect ~~shall~~must notify the OSF of any such conflicts as soon as they become known.

**1097.42.2** Where this document is specific and is at variance with a code or standard referenced herein, this document ~~shall~~must govern whether more or less stringent.

#### **107.3** ~~Types of Construction and Allowed Occupancies~~

**107.3.1** ~~The following minimum types of construction as defined by the Building Code shall govern:~~

**107.3.1.1** ~~Type I construction is acceptable for all buildings per the size requirements of the Building Code~~

**107.3.1.2** ~~Type II construction is acceptable for all buildings per the size requirement of the Building Code~~

**107.3.1.3** ~~Type IV (Heavy Timber) construction is acceptable for all buildings per the size requirements of the Building Code.~~

**107.3.1.4** ~~Type III and Type V construction is acceptable per the size requirements of the Building Code for all nonacademic independent structures that do not have Group E or Group A occupancies.~~

**107.3.1.4.1** ~~Type III and Type V construction may be used for Group A-5 accessory use areas including concession stands, retail areas, and press boxes.~~

**107.3.1.5** ~~Type III and Type V construction is acceptable for all fully sprinklered buildings per the size requirements of the Building Code. Owners will need to consider materials that cover the wood and their ability to sustain impact~~

**107.3.1.5.1** ~~Type III and Type V construction may be used for Group A-5 accessory use areas including concession stands, retail areas, and press boxes.~~

**107.3.2** ~~Type III and V buildings shall be separated from all other structures by a minimum of 30 feet except in the case of press boxes.~~

#### **SECTION 110 PERMITS**

**~~110.1602.1~~** The design professionals ~~shall~~must be responsible for obtaining all design-related permits and approvals. ~~Status~~Copies of permits and approvals ~~shall~~must be submitted to the OSF along with final review documents.

**~~110.2602.2~~** The school district is required by law to comply with local zoning ordinances. ~~The OSF further requires the design professionals to submit a set of construction documents to the local zoning authority to review for compliance prior to construction bidding.~~

**~~110.3602.3~~** The contractor is not required to purchase a building permit from the local building official for general construction, as district projects are exempt from this requirement by S.C. Code Ann. § 6-9-110 (1990).

**~~110.4602.4~~** ~~Construction p~~Permits and approvals required by South Carolina state laws and regulations include, but are not limited to, those listed in the schedule below. Permits and approvals required by Federal laws and regulations have not been included in this schedule; however, the school district must comply with requirements of federal agencies (e.g., EPA, Corps of Engineers), whenever required by law.

#### **DESIGN AND CONSTRUCTION RELATED PERMITS AND APPROVALS**

The following list is not all-inclusive of every permit and standards applicable to each project and not all projects will require all of the permits listed below. District and A/E's must determine applicable permits for each project..

<u>Type of Development</u>	<u>SC Law or Reg.</u>	<u>Where to Obtain Permit/Approval</u>	<u>Status</u>
<u>Air pollutant discharge</u>	<u>48-1-100, R61-62.1</u>	<u>SCDHEC - Air Quality Control</u>	
<u>Asbestos abatement</u>	<u>R61-86.1</u>	<u>SCDHEC - Air Quality Control</u>	
<u>Building construction, Zoning</u>	<u>6-7-830, 6-9-110</u>	<u>Local Authority</u>	
<u>Community residential care facilities</u>	<u>R61-84</u>	<u>SCDHEC - Health Facilities Construction</u>	
<u>Construction in critical coastal areas</u>	<u>48-39-10, 130, 190</u>	<u>SCDHEC - Ocean &amp; Coastal Res. Mgmt.</u>	
<u>Construction in navigable waters</u>	<u>49-1-16</u>	<u>SCDHEC - Water Pollution Control</u>	
<u>Dams and reservoirs</u>	<u>49-11-200, R72-1, 2, 3</u>	<u>SCDHEC - Water Pollution Control</u>	
<u>Demolition of Real Property</u>	<u>R61-86.1</u>	<u>SCDHEC - Air Quality Control</u>	
<u>Design Review Board (BARs, SC Dept Archives &amp; History, etc.)</u>	<u>Various local</u>	<u>Various local</u>	
<u>Early Childhood Development</u>	<u>R114-500</u>	<u>SCDSS – Child Care Licensing</u>	
<u>Elevators</u>	<u>41-16-10, R71-5000-5900</u>	<u>SC Department of Labor, Licensing &amp; Regulation</u>	

## **DESIGN AND CONSTRUCTION RELATED PERMITS AND APPROVALS**

The following list is not all-inclusive of every permit and standards applicable to each project and not all projects will require all of the permits listed below. District and A/E's must determine applicable permits for each project..

<u>Type of Development</u>	<u>SC Law or Reg.</u>	<u>Where to Obtain Permit/Approval</u>	<u>Status</u>
<u>Fire Department (Local)</u>	<u>Various local &amp; State</u>	<u>Servicing Fire Department</u>	
<u>Fire, Building Automatic Sprinkler System and underground supply</u>	<u>40-10-260, R71-8300.4</u>	<u>State Fire Marshal</u>	
<u>Floodplains, construction in</u>	<u>Exec. Order 82-19</u>	<u>SCDNR</u>	
<u>Food service including concession and temporary</u>	<u>R61-25</u>	<u>SCDHEC – State and Local Office</u>	
<u>Hazardous waste management, Storage and disposal</u>	<u>44-56-20,60, R. 61-79</u>	<u>DHEC, Solid and Hazardous Waste</u>	
<u>Historical building rehabilitation</u>	<u>R12-125, 126</u>	<u>Archives and History, Local Authority</u>	
<u>Road encroachment, local road</u>	<u>57-7-60</u>	<u>Local City or County Authority</u>	
<u>Road encroachment, state road</u>	<u>57-5-1080</u>	<u>SCDOT Traffic Engineering Office</u>	
<u>Sanitary sewer; treatment &amp; disposal</u>	<u>R61-56, 57</u>	<u>SCDHEC – Domestic Wastewater</u>	
<u>Septic tank system</u>	<u>R. 61-56</u>	<u>DHEC, Wastewater Management, Division of Environmental Health</u>	
<u>Storm water discharge, erosion and sediment control</u>	<u>R61-9; R72-100-108</u>	<u>SCDHEC – Water Pollution Control; State Engineer; Local Authority</u>	
<u>Swimming areas, natural public</u>	<u>R61-50</u>	<u>SCDHEC – Water Supply Construction</u>	
<u>Swimming pools, public</u>	<u>R61-51</u>	<u>SCDHEC – Water Supply Construction</u>	
<u>Underground storage tanks</u>	<u>R61-92</u>	<u>SCDHEC – Groundwater Protection</u>	
<u>Waste discharge (sewage, industrial waste, etc.)</u>	<u>48-1-100, 110, R61-9</u>	<u>SCDHEC – Water Pollution Control</u>	
<u>Water supply, potable</u>	<u>44-55-40, R61-57, 58</u>	<u>SCDHEC – Water Supply Construction</u>	
<u>Water supply, fire protection system</u>	<u>40-10-260, R71-8300.4</u>	<u>State Fire Marshal</u>	
<u>Wells, Underground injection</u>	<u>R61-71, 87</u>	<u>SCDHEC – Groundwater Protection</u>	
<u>Vocational facilities</u>	<u>Various</u>	<u>LLR Board of Cosmetology, LLR Board of Barber Examiners</u>	

## **DESIGN AND CONSTRUCTION RELATED PERMITS AND APPROVALS**

The following list is not all-inclusive of every permit and standards applicable to each project and not all projects will require all of the permits listed below. District and A/E's must determine applicable permits for each project..

<u>Type of Development</u>	<u>SC Law or Reg.</u>	<u>Where to Obtain Permit/Approval</u>	<u>Status</u>
		<u>SCDHEC Food Service</u>	
<u>Zoning(Municipal, County or District)</u>	<u>Various</u>	<u>Local</u>	

~~110.5603.4~~ The "State of South Carolina Building Standards in Flood Plain Areas" requires compliance with the criteria set forth in Sections 60.3 and 60.5 of Title 44, Code of Federal Regulations available from the State Coordinator's Office for the National Flood Insurance Program (NFIP). See also [http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=4c3b8d3a9b324b28c83f066afc0f2425&tpl=/ecfrbrowse/Title44/44cfr60\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=4c3b8d3a9b324b28c83f066afc0f2425&tpl=/ecfrbrowse/Title44/44cfr60_main_02.tpl). Flood hazard areas are those identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary maps (FHBM) that are subject to inundation by a 100-year flood.

110.5.1 All plans for new construction, substantial improvement and other development in a flood hazard area (floodplain) must be submitted to the responsible local authority to obtain a permit to develop in a flood hazard area.

110.5.2 A permit must be obtained and the OSF must be provided with a permit copy prior to advertising a project for bids.

## **SECTION 111 GENERAL BUILDING, MATERIAL AND SYSTEM REQUIREMENTS**

~~111.1304.4.2.1~~ All components used in an assembly that is required to be rated ~~shall~~ must be tested and certified to meet rating required as outlined in the IBC. Testing and certification ~~shall~~ must be performed by an accepted testing lab (UL, Warnock Hersey, etc.). If a component that has not been tested is to be used, then the fire resistance of said component ~~shall~~ must be established by alternative methods of determining fire resistance as allowed in Chapter 1 and 7 of the International Building Code and verified by the design professional. Documentation ~~shall~~ must be present on site stating method for determining fire resistance and data showing compliance with required fire resistance rating. In an instance where tested concrete block or any other component of a rated assembly is required in a tested design assembly, components meeting the requirements of the current building code for the required fire resistance rating ~~shall~~ must be accepted as equivalent to the components tested by a testing lab.

~~111.2107.3.3~~ Due to the numerous problems associated with the use of fire retardant treated wood in construction due to exposure to moisture and deterioration of fasteners or attached materials, the use of fire retardant treated wood will not be allowed.

111.3 Buildings that have been out of use for more than one year must be brought up to code as a new building before they are re-occupied.

111.4 When the use of a building changes the occupancy classification as defined in the building code, the building must be brought up to meet the code requirements of the new classification.

~~111.5~~ ~~503.4~~ — Extensive renovation projects valued in excess of 50 percent of a school's insured value are expected to add significantly to school building life expectancy and shall ~~must~~ include a seismic/wind load evaluation of the building, improvement recommendations and costs for school district consideration. Alterations, repairs, additions, and rehabilitation to an existing building or structure must comply with the State Fire Marshal's Rules and Regulations and the International Existing Building Code as applicable. The term "building value" referred to in the State Fire Marshal's Rules and Regulations must be the insured value of the structure.

**111.4 Construction Safety Coordination Plan for Work Performed in and adjacent to an Occupied Building** ~~Joint Occupancy:~~ The design professional in conjunction with school district staff and, if applicable, the construction/program manager shall ~~must~~ develop a written and/or graphic plan to maintain the safety, separation and egress requirements of students, staff, and visitors while construction activities are in progress. The plan shall ~~must~~ address exit access, exit width, travel distance, building separation, site traffic circulation, etc.; as code would require for the occupied portion of the project ~~for each phase of construction~~. This plan shall ~~must~~ be submitted no later than the design development phase. This approved plan shall ~~must~~ be made part of the construction documents.

## **SECTION 112 BOARD OF APPEALS**

~~115.3 Alternative Compliance:~~ The OSF has the authority to accept alternative methods of compliance within the intent of these regulations, after finding that the materials and method of work offered is for the purpose intended, at least the equivalent of that prescribed in these regulations in quality, strength, effectiveness, fire resistance, durability, and safety. The OSF shall ~~must~~ require sufficient evidence or proof be submitted to substantiate any claim that may be made regarding use of alternative. All requests for acceptance must be supported by and submitted by a South Carolina registered design professional.

**112.1** In order to hear and decide appeals of orders, decisions or determinations made by the OSF relative to the application and interpretation of the codes referenced in this Guide, there must be established a board of appeals whose members must be appointed by and who must serve at the pleasure of the SC State Superintendent of Education. The OSF must establish procedures for conducting the board's business.

**112.2** An application for appeal must be based on a claim that the true intent of the referenced codes has been incorrectly interpreted, the provisions of the referenced codes do not fully apply or an equally good or better form of construction is proposed. The board must have not authority to waive requirements of the referenced codes or the Guide.

**112.3** The board of appeals must consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the SC Department of Education or a school district.

## **SECTION 11308 PROCUREMENT**

**11308.1** Procurement of professional design services, construction and goods and services is the responsibility of each school district in accordance with their established procurement code. Although the procedures outlined in this Guide are based on the design-bid-build method of construction procurement, the OSF recognizes all procurement methods authorized and defined in South Carolina Code Ann. §11-35-2910 and §11-35-3005. If a district elects to utilize a project

delivery method other than design-bid-build, the district must notify the OSF prior to any bidding to coordinate submittal, inspection and other requirements. If the district would propose a plan submittal and approval process that differs from the procedures in the Guide, the district must coordinate new procedures prior to and bidding.

59-19-93 requires school districts to adopt and file with the Division of General Services of the State Budget and Control Board a procurement code modeled on the South Carolina Consolidated Procurement Code or the model set forth in the *Report of the Local Government Task Force on Procurement*. Districts define their procurement of services such as contracting with A/E's in these codes. Design professionals and school districts need to coordinate on the proper procurement for school building projects.

**108.2—Project Delivery Methodology:**—The OSF recognizes the following methodology as alternatives to the competitive sealed bidding for construction contracts (as defined in Chapter 6, “Manual for Planning and Execution of State Procurement Improvements, Part II, 1999 Edition” as published by the Office of the State Engineer, Office of General Services, State Budget and Control Board):

**108.2.1—Construction Management At-Risk** allows a district to select a CM based on qualifications; make the CM a member of a collaborative project team; centralize responsibility under a single contract and obtain a bonded guaranteed maximum price. Districts should confer with their general counsel to ensure proper procurement.

**108.2.2—Design-Build** provides for a single contract between a district and an A/E/Contractor team. The design-build team contracts for all design and construction services based on a set of criteria developed by the district. This same criteria is used by the district to select the design-build team. The OSF allows design-build for any district capital improvements other than educational occupancy. Examples may include district offices, maintenance facilities, bus facilities, and assembly, etc.

**108.2.3—Fast Track Construction** will be permitted for public school work as a system of awarding sequential prime contracts for succeeding stages of work, with the earlier contracts being awarded before the architect has completed all of his construction documents.

**108.2.3.1**—“Fast tracking” is permitted for both the single contract concept (i.e., for each component of the work) and also for the multiple contract concept of construction.

**108.2.3.2**—Prior notice of the intent to use this method of construction shall first be given to the OSF before the architect proceeds with construction documents.

**108.2.3.3**—The requirements of this *Guide*, while written primarily for the single contract method of construction shall also apply to each contract of the fast track method except where otherwise waived by the OSF.

**108.2.4—Best Value Contracting** allows districts to review both price and qualification factors at the time of contractor proposal submittals.

**108.2.5—Indefinite Delivery/Job Order Contracting** allows the district to contract for services based on limited information about future projects. Projects are typically relatively small in scope and cost and require accelerated completion. Contract bidding may be accomplished by definition of minimum scope of work, unit prices, or overhead and project margins.

**108.2.6—Multi-Prime Contracting** allows for the division of project work into a number of contract packages to save time and cost. In essence, the district assumes the role and risk of being

the general contractor. The cost of the project is potentially reduced by eliminating the general contractor's fees.

**113.2108.3 Pre-qualification:** Project delivery methodology may be subject to pre-qualification as prescribed by the district's procurement code. ~~These pre-qualifications are set by the procurement code of each district (see 108.1).~~

**113.3** The requirements of this *Guide*, while written primarily for the single contract method of design-bid-build construction must also apply to each contract of the multi-prime or fast track method except where otherwise waived by the OSF.

~~113.4114.1.1~~ The scope and schedule for Energy conservation measures installed under a guaranteed energy savings contract must shall be coordinated with the OSF approved by the Office of School Facilities (OSF) prior to signing of a contract. Any vendor that has executed an energy savings contract with a school district, that includes hHeating, ventilating, or air conditioning system modifications or replacements, replacement or modification of lighting and/or electrical systems, energy recovery systems, and/or measures that are affected by any applicable codes, shallmust be submitted as complete drawings and specifications, with a professional seal of an Architect and/or Engineer licensed to practice in South Carolina, to the OSF for approval prior to installation of those measures. Drawings are not required if the scope of work is defined, in writing, to the approval of the OSF. Third party inspections are required for all applicable work. The OSF notification, inspection and acceptance of the work will be as outlined in the Guide. This same professional shall notify the OSF of the installation of the aforementioned conservation measures to give the OSF the option of inspecting the actual installation of the installed measures in the field.

## **SECTION 109—BOARD OF ADJUSTMENT AND APPEALS**

~~109.1~~ There shall be a Board of Adjustment and Appeals constituted to hear appeals concerning matters related to codes and standards. The general structure, operating procedures and powers of this Board shall be in accordance with the building code.

~~109.2~~ Where the "building code sections" refer to the "building official," this shall be construed to mean the State Superintendent of Education as represented by the director of the Office of School Facilities.

## **SECTION 1140 OTHER RELATED STANDARDS SOUTH CAROLINA OSHA STANDARDS**

~~114.1105.5.3~~ Building fire suppression automatic sprinkler systems are to be submitted to the State Fire Marshal's Office for review and approval in accordance with the State Fire Marshal's Rules and Regulations. Submittal, whether during design or construction, is determined by the A/E.

~~114.2105.5.5~~ Any project in which requires asbestos or other hazardous material mitigation or other hazardous material is involved and is, therefore, subject to AHERA and DHEC regulation

~~114.30.1~~ Schools ~~shall~~must be in compliance with OSHA Standards. For further information, contact the Division of Occupational Safety and Health, South Carolina Department of Labor, Licensing and Regulation.

~~110.2~~ For further information, contact the Division of Occupational Safety and Health, South Carolina Department of Labor, Licensing and Regulation.

## **~~SECTION 111—DHEC STANDARDS~~**

~~111.1—Section 44-1-140, Code of Laws of South Carolina, 1976, gives the Department of Health and Environmental Control authority to adopt policies, rules, and regulations in connection with the furtherance of public health.~~

~~111.42~~ In reference to school food services and facilities, DHEC has set forth its requirements in this regard in Regulation 61-25 entitled “Retail Food Establishments.” The owner must contact the Division of Food Protection, Bureau of Environmental Health to obtain this regulation and to secure plan approval.

## **~~SECTION 112—DOT STANDARDS~~**

~~114.52.1~~ Standards relating to roadway access have been developed by DOT in accordance with Sections 57-3-110, 57-5-1080 and 57-5-1090 of the Code of Laws of South Carolina (1976 as amended through the 2006 Session of the General Assembly.) They can be found in the document titled “2008 Access and Roadside Management Standards,” available on the DOT website.

## **~~SECTION 113—SCHOOL BUS PARKING LOTS AND BUS SAFETY~~**

~~114.63.1~~ Standards and Guidelines concerning bus safety on school sites and planning bus parking lots have been developed by the Transportation Office of the SC Department of Education. They can be found in the document, *Planning for Bus Safety on School Sites and School Bus Parking Lots*. This document is available on the OSF web site.

## **~~SECTION 114—GUARANTEED ENERGY SAVINGS CONTRACTS~~**

~~114.1—The South Carolina Energy Conservation and Efficiency Act, as amended, January 1, 1993, allows governmental units, including public school districts, to enter into guaranteed energy saving contracts. “A guaranteed energy savings contract may be awarded pursuant to Section 11-35-1530 (an RFP) if it includes a written guarantee that savings will meet or exceed the cost of energy conservation measures.” The following requirements, relative to guaranteed energy savings contracts, shall be minimum and mandatory.~~

~~114.1.1—Energy conservation measures installed under a guaranteed energy savings contract shall be approved by the Office of School Facilities (OSF) prior to signing of a contract. Any vendor that has executed an energy savings contract with a school district, that includes heating, ventilating, or air conditioning system modifications or replacements, replacement or modification of lighting and/or electrical systems, energy recovery systems, and/or measures that are affected by any applicable codes, shall submit complete drawings and specifications, with a professional seal of an Architect and/or Engineer licensed to practice in South Carolina, to the OSF for approval prior to installation of those measures. Drawings are not required if the scope of work is defined, in writing, to the approval of the OSF. This same professional shall notify the OSF of the installation of the aforementioned conservation measures to give the OSF the option of inspecting the actual installation of the installed measures in the field.~~

~~114.1.2—Districts shall make certain the lighting levels required by this *Guide* are met.~~

~~114.1.3—Districts shall request the State Energy Office review the methodology used by the energy vendor to project and measure the guaranteed savings. These reviews will be provided at no cost to the districts. More detailed study can be negotiated with the State Energy Office.~~

~~114.2—In executing guaranteed energy savings contracts, the district should also consider the following:~~

~~114.2.1—District should obtain an independent building energy systems evaluation or audit, recommended energy savings actions, estimated cost, and projected savings to use as the basis for any energy savings RFP, bid request or vendor agreement.~~

~~114.2.2—District should understand and be in agreement with the determination of and adjustments to the base line energy consumption figure designated by the vendor.~~

~~114.2.3—District should understand and be in agreement with proposed contract comfort and lighting levels, as well as, occupancy rates or schedules. Use of an independent lighting consultant is recommended to determine lighting needs and modifications, prior to and as the basis for any energy savings RFP, bid request or vendor agreement.~~

~~114.2.4—District should understand the method for measuring savings and should be in agreement with any metering techniques. Savings calculations should not be ambiguous.~~

~~114.2.5—District should be in agreement with who performs post installation audit of energy savings and an independent auditor is strongly recommended.~~

~~114.2.6—Contract should be clear as to who owns equipment at end of lease or contract term. If equipment is not owned by district at end of contract, does the district have option to buy equipment, extend lease under new terms, or have equipment removed? Responsibility for the expense of removal should be specified as well.~~

~~114.2.7—District should consider having an early termination clause added to the contract and/or a clause specifying that district can buy the equipment from vendor before end of contract.~~

~~114.2.8—District should consider adding an arbitration clause to contract to document how disputes over savings measurements and calculations should be resolved.~~

~~114.2.9—The OSF recommends a process that can effectively evaluate energy service value from project comprehension through pricing.~~

~~114.2.10—District should require clear separation and definition of equipment and/or fixture costs, labor cost, sub-contractor and prime contractor fees, and/or profit and financing costs in terms of actual percent interest.~~

~~114.2.11—Total payments by districts for the project should not exceed total savings including a reasonable cost of financing, maintenance, repair costs, reasonable overhead and profit.~~

~~114.2.12—District should receive an adjustment in amount owed vendor to account for any changes in energy consumption due to any energy conserving equipment or measures taken by district and not included in a guaranteed energy saving contract. A method for making such adjustments should be part of the agreement.~~

~~114.2.13—District should explore coordination of their contract in conjunction with facility capital needs projects (renovation and addition).~~

## **~~SECTION 115—WAIVERS~~**

~~115.1— Section 43-261, Code of Regulations provides that the State Board of Education may waive any regulation, which would impede the implementation of an approved District Strategic Plan or School Renewal Plan.~~

~~115.1.1— When a district's Strategic Plan is at variance with the regulations contained herein, the district board or its designee shall submit to the State Board of Education through the Office of School Facilities a detailed description of the programmatic variance to include the code section(s) or standard(s) at issue and the physical facility requirements necessary, as well as, the educational requirement necessary to implement the district's Strategic Plan.~~

~~115.2— South Carolina Code Ann. §59-23-230 (Supp. 2009) authorizes the State Superintendent of Education to waive regulations relating to building square footage requirements for construction of a new public school.~~

~~115.3— **Alternative Compliance:** The OSF has the authority to accept alternative methods of compliance within the intent of these regulations, after finding that the materials and method of work offered is for the purpose intended, at least the equivalent of that prescribed in these regulations in quality, strength, effectiveness, fire resistance, durability, and safety. The OSF shall require sufficient evidence or proof be submitted to substantiate any claim that may be made regarding use of alternative. All requests for acceptance must be supported by and submitted by a South Carolina registered design professional.~~

## **SECTION 115 WAIVERS**

115.1 Section 43-261, Code of Regulations provides that the State Board of Education may waive any regulation, which would impede the implementation of an approved District Strategic Plan or School Renewal Plan.

115.1.1 When a district's Strategic Plan is at variance with the requirements of the Guideregulations contained herein, the district board or its designee must submit to the State Board of Education through the Office of School Facilities a detailed description of the programmatic variance to include the requirement(s)code section(s) or standard(s) at issue and the physical facility requirements necessary, as well as, the educational requirement necessary to implement the district's Strategic Plan.

115.1.2 The State Board of Education cannot waive requirements in referenced codes listed in Section 108.

115.2 South Carolina Code Ann. §59-23-230 (Supp. 2009) authorizes the State Superintendent of Education to waive regulations relating to building square footage requirements for construction of a new public school.

## **SECTION 116 OTHER DESIGN RESOURCESDESIGNING SAFER SCHOOLS**

**116.1** The Office of School Facilities (OSF) believes in enhancing safety and discouraging violence and crime by careful consideration in the design of sites and buildings. By applying principles of CPTED (Crime Prevention Through Environmental Design) and other design features to reduce or eliminate conflicts or hazardous conditions, a safe, functional and orderly environment can be established. The OSF endorses the concept that a safer environment can create a psychological advantage for positive behavior and for learning.

~~116.2— **CPTED Principles:** Campus crime and violence can be significantly reduced through the application and interaction of the following seven key components of CPTED.~~

**116.2.1—Access Control:** Controlling campus access, either through natural or formal components, is a basic concept of creating a safe school climate. Access by non-students during, as well as after school hours should be carefully controlled, as should the timely and orderly access by students, visitors, staff and service personnel.

**116.2.1.1—Campus Perimeter:** Design the campus so that visitors and guests must pass through a particular point or entrance, which is clearly visible to a passerby and administration.

**116.2.1.2—Entrances and Exits:** Minimize the number of entrances and exits to the campus and direct traffic flow, both vehicular and pedestrian, to eliminate confusion and congestion and provide ease of observation. Design parking areas to limit and control access. Place student parking areas where clearly visible from administration and consider breaking up very large lots into smaller, more manageable ones.

**116.2.1.3—Visitor Parking:** Clearly identify visitor parking with proper signage and set up visitor traffic, both vehicular and pedestrian, in a way that it can be easily supervised from the main office or by assigned security personnel.

**116.2.1.4—Visitor Screening:** Clearly worded and placed signage should direct visitors to the main office or designated visitor reception area where they can be screened, using uniform visitor screening procedures, to ensure that they have legitimate business on campus.

## **116.2.2—Natural Surveillance**

**116.2.2.1—Formal Gathering Areas:** Gathering areas should be formally identified in locations with natural surveillance and access control or assigned to locations out of view of the would-be offender. Informal areas then become off limits and subject to automatic scrutiny. Clear spatial definition will cause unauthorized users to feel at greater risk and staff to assume greater challenging powers.

**116.2.2.2—Natural Supervision:** Enhance supervision by eliminating architectural barriers. Ensure open sight lines through the design and proper placement of building, landscaping components, lighting, and access control. Clear the under-story and low branches in wooded areas; maintain visibility of play fields and tennis courts from major site circulation routes.

## **116.2.3—Formal Surveillance**

**116.2.3.1—High-risk Areas:** Design high-risk areas to accommodate natural surveillance to the extent possible and to facilitate formal supervision where required. Such areas may include the main entrance or campus perimeter—especially where problems with intruders are typical. Toilet rooms and corridors, stairways, and locker clusters are often key trouble spots. Commons areas and courtyards frequently have similar problems. Remote locations, such as parking areas and outside play courts, may create additional risks.

**116.2.3.2—Remote Surveillance:** Where limited staff availability or high number of identified problem areas generate a need for other, more formal surveillance options, security specialists should be consulted on equipment specifications, placement, operation, and management.

**116.2.4—Territoriality:** Ensure the personalization of space assigned to each person, in order to emphasize the perception of ownership. This translates to the identification of territories within the school campus, assignment of internal territories to “proprietors,” and assignment of general supervision and care responsibilities that go with “ownership” of the identified spaces.

**116.2.4.1—Delineation of Space:** Space should be clearly delineated among the various areas of the campus to encourage territoriality and better control. For example, it should be clear when one is moving from the fine arts wing to the science department to the math department, or from one “house” to another in the lower grades. Smaller spaces may be assigned to individual teachers or staff. For instance, the locker area immediately outside a classroom door may be identified with that classroom teacher by means of color, pattern or other design features. Doorways and vision panels may need to be designed to facilitate natural surveillance of these areas from within the classroom.

**116.2.5—Defensible Space:** Environmental concepts can contribute to the productive management of schools by providing clearly marked transitional zones that indicate movement from spaces designated for public, combined, and private use.

**116.2.5.1—Access Points:** Reduce access points to parking areas to decrease the perception that they are public spaces; reduce the possible escape routes for potential offenders; and increase the perception that they are risky for the potential intruder. Use gates to close off unnecessary entrances during low use times to control access and reinforce the perception that the parking areas are private.

**116.2.6—Target Hardening:** Effective target hardening maintains a balance between the development and implementation of appropriate security measures and visually creating a prison or fortress. It must include the vigorous pursuit of identifying, apprehending, and prosecuting criminals, to the end that the school campus becomes unattractive as a target for entertainment or challenge.

**116.2.6.1—Target Hardening:** Design facilities with the idea of making the perpetrator’s objective difficult to attain and of controlling crime by slowing the perpetrator’s progress. Reduce the number of doors that are not observable from drives and parking; avoid deep recesses and potential hiding areas.

**116.2.7—Program Interaction:** Effective program interaction can be achieved through a combination of designing facilities that enhance both natural and formal supervision and the development and utilization of a close partnership among law enforcement and emergency service personnel, administration, staff, and students.

**116.2.7.1—Enhanced Natural Surveillance:** Activities which are easily supervised can be assigned to areas where unauthorized infringement might normally occur. Natural surveillance for these activities will be enhanced through the increased perceptions of safety for the legitimate user and risk for the potential offender. Activities which are more difficult to supervise can be assigned to areas where infringement is typically less likely to occur.

**116.2.7.2—Conflict Reduction:** Provide separate entrance and exit patterns to spaces with concentrated high volume use, such as cafeterias and corridors, to reduce time required for movement into and out of spaces and to reduce the opportunity for personal conflict. Separation of student traffic flow can help define orderly movement and save time, and the illegitimate user will feel at greater risk of detection.

**116.2.7.3—Communication:** Design communication systems to overcome distance and isolation. Two-way intercom systems and telephones are even more critical for remote relocatable classroom (portable) units or isolated buildings.

**116.2.7.4 Modifications:** Redesign problem spaces and uses of spaces to provide natural barriers for conflicting activities. As an example, where congestion and conflict are likely to occur when classes are entering and leaving a cafeteria at the same time using the same entrance, separate the entrance and exit so that different traffic routes are utilized for moving from and returning to instructional areas.

**116.2.7.5 Clear Borders:** Provide clearly defined borders for controlled space. Design features such as changes in color, volume, or eased openings can be effective in defining boundaries.

#### **SECTION 117—LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)/OR OTHER HIGH PERFORMANCE STANDARD CERTIFICATION**

**116.27.1** The OSF encourages school districts to follow the principles of LEED (Leadership in Energy and Environmental Design), Green Globes or other high performance standard certification in school construction. Design professionals can assist in determining the most advantageous principles and/or certification level.

LEED for Schools is a green building rating system developed by the U.S. Green Building Council specifically for K-12 schools and higher education facilities. The rating system is designed to help improve all occupants' health, the staff and children's productivity, and children's learning capacity while also helping school facilities to reduce operations and maintenance costs, be more energy efficient, and be more resource friendly.

For further information about LEED visit the following website:  
[http://en.wikipedia.org/wiki/Leadership\\_in\\_Energy\\_and\\_Environmental\\_Design](http://en.wikipedia.org/wiki/Leadership_in_Energy_and_Environmental_Design)

## DIVISION 26

### SCHEMATIC AND DESIGN DEVELOPMENT PHASE DESIGN AND CONSTRUCTION PHASE REQUIREMENTS

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#### SECTION 202604 SCHEMATIC PLAN SUBMITTAL

~~202.1604.1~~ One copy set of Schematic plans should be submitted -submittal is for new facilities, major additions and major renovations. Schematic plan review is optional but is encouraged for large and complex projects. Schematic plans submitted shall be single copy and consist of the following:

~~202.2~~ Site plan to include the following to the extent information is available:

1. North arrow;
2. Building outline(s);
3. Property lines;
4. Adjacent roadways;
5. Easements;
6. Encroachments;
7. Setbacks;
8. Parking areas;
9. Playing fields;
10. Existing Contours;
11. Adjacent structures and distance;
12. Other items defining the site such as hazards, wetlands, wooded areas, etc.

~~202.3~~ Floorplans to include the following to the extent information is available:

1. Individual spaces with names indicating intended use;
2. Egress paths with anticipated exit capacities and travel distances;
3. Location of fire walls, occupancy separations, exit enclosures and horizontal exits.

~~202.4~~ Other information to be submitted:

1. Schematic Document Transmittal Form;
2. Form F3 with available information;
3. Form F6 with available information;
4. Any other information in narrative form describing program elements or design intent that will impact design solutions.

##### ~~604.1.1~~ Site Plan

~~604.1.1.1~~ Should show entire site plan with building layout, drives, parking areas, walks, environmental learning areas, playing fields, and other such basic data.

~~604.1.1.2~~ Topographical information is optional with the design professional.

~~604.1.2~~ **Floor Plan(s)**

~~604.1.2.1~~ Should be at appropriate scale (1/16" preferably), drafted accurately, indicating doors and windows.

~~604.1.2.2~~ Should indicate names of areas and show in small rectangular block the square footage of each main area. Show grade classification for elementary classrooms.

~~604.1.2.3~~ When using the schematic plan submittal, submission of a building code analysis (Form F3) is required at this stage.

~~604.1.2.4~~ For additional required plan information see Sections 605.1.6.1.5, 605.1.6.1.6, and 605.1.6.7.

~~604.1.3~~ **Form F6:** Preliminary Information Form shall be submitted.

**SECTION 203.1 ~~605.1~~ DESIGN DEVELOPMENT SUBMITTAL (required)**

~~203.1 ~~605.1~~~~ One set of design development plans must be submitted for all projects. The design development submittal shall be a single copy and shall consist of the following:

**203.2** Site plan at an appropriate scale to include the following:

1. North arrow;
2. Building(s);
3. Actual property lines and any assumed for code analysis purposes;
4. Adjacent roadways with full width right of way information;
5. Easements;
6. Encroachments;
7. Setbacks;
8. Parking areas;
9. Playing fields;
10. Traffic routing for pedestrians, bicycles, vehicles and busses;
11. Existing and proposed contours;
12. Adjacent structures and distance;
13. Utilities above and below ground including within road right of way;
14. Fire apparatus access;
15. Other items defining the site such as hazards, wetlands, wooded areas, etc.

**203.3** Drawings at an appropriate scale to include the following:

1. Form F3 and list of applicable permits;
2. Overall plan at a smaller scale if scope of work cannot be shown entirely on one plan;
3. If the project is a renovation or addition to an existing building, provide information for the existing building that would affect code considerations such as allowable building area, egress, plumbing fixture counts, etc.
4. Floorplans indicating names for individual spaces and intended use, grade classification and occupancy load;
5. Developed life safety plans with walls, floor and roof rating delineated, egress routes with exit capacities, widths and travel distances noted and areas of refuge identified;

6. Location of fire walls, occupancy separations, exit enclosures, horizontal exits, smoke enclosures and rated shaft locations;
7. Elevations and building sections sufficient to describe the building;
8. Location of equipment and furnishings requiring utility connections or affecting egress.

**203.4 Other information to be submitted:**

1. Design Development Document Transmittal Form;
2. Form F6 with available information;
3. Response to previous comments if reviewed;
4. Any other information in narrative or diagrammatic form describing program elements or design intent.

**605.1.1—Site Plan**

605.1.1.1—Include a small location map that relates the site to the surrounding locale.

605.1.1.2—Show the entire site plan at suitable scale. Indicate all topographic information with existing and proposed finished grades, boundary lines, wooded areas, orientation, site acreage, existing utilities, including fire hydrants, and other pertinent data.

605.1.1.3—Indicate the drives, parking areas, walks, playing fields, highways, etc.

605.1.1.4—Indicate the building location, floor grade level, areas of future anticipated expansion, etc.

605.1.1.5—Indicate the source of water, gas, electric, or sewage facilities.

605.1.1.6—In cases of additions to existing buildings, or new buildings added to an existing school complex, all of the above information should be shown, including the entire site plan and indication of all existing buildings with floor grade elevations shown. However, total topographic information will not be required and may be limited at the design professional's discretion to the general area of the site where new construction or other changes occur.

**605.1.2—Floor Plans**

605.1.2.1—The building code analysis (Form F3) shall be incorporated into the drawings.

605.1.2.2—At appropriate scale (1/8" preferably). If entire plan cannot be shown on one sheet, prepare smaller scale (1/16" preferably) overall plan along with larger scale partial plans to form the whole.

605.1.2.3—Indicate names of areas and show in small rectangular block the square footage of each main area. Show grade classification for elementary classrooms.

605.1.2.4—Indicate windows, doors, and door swings

605.1.2.5. Indicate on floor plans all built-in cabinet work, sinks, chalkboards, tackboards, lockers, and other like features. Where classrooms are repetitious, chalkboard and tackboard may be indicated as typical in just one space.

**605.1.3—Exterior Elevation Drawings**

605.1.3.1— Show all sides at a convenient and readable scale.

#### 605.1.4— Equipment and/or Furnishing Layouts

605.1.4.1— Indicate on not less than 1/8" floor plans (unless otherwise waived by the OSF), equipment and furnishing layouts. Identify various items by name and give other pertinent data. Include areas as follows:

art rooms	media center
auditorium seating	computer labs
gym seating and dressing rooms	science labs
any and all vocational training facilities	home economics rooms

Exception: With the exception of the media center layout, portable equipment or furnishings that are not directly related to utility requirements need not be indicated.

605.1.4.2— Indicate on a separate 1/4" scale drawing equipment layout for kitchen areas, including kitchens in connection with vocational curricula. Include an itemized legend of equipment with all layouts.

#### 605.1.5— Cross Section Drawings

605.1.5.1— Diagrammatic type drawings are sufficient without undue detail. Indicate ceiling heights, roof slope, general structure, etc.

605.1.5.2— At appropriate scale (1/8" or 3/16" preferably)

605.1.5.3— Cross sections shall be included so that all major elements of the building are shown.

605.1.5.4— Structural conditions at firewall(s)

#### 605.1.6— Building Code Analysis

605.1.6.1— Building code compliance is the responsibility of the design professional(s) representing the district and an outline code analysis, Form F3, shall be incorporated into the drawings for review. Submitted data shall set forth all pertinent code requirements, including the following:

### SECTION 204 CONSTRUCTION DOCUMENT SUBMITTAL

204.1— One set of District approved construction document plans sealed in accordance with state statutes and regulations must be submitted for all projects. Incomplete plans or specifications will not be reviewed until all information has been received.

204.2— Construction document submittal must include:

1. Complete plans including all alternates;
2. Complete specifications including front end and all technical specifications;
3. Previously submitted information must be updated as required;
4. Status of all permits;
5. Written responses to previous review comments.

204.3— Projects cannot be advertised for bid until plans and specifications have been approved by the OSF.

204.4 If advertising is delayed longer than six months after initial approval of construction documents by the OSF, the design professional must request in writing a new permission to advertise. The design professional must certify that no changes have been made to the original contract documents or must resubmit revised contract documents for review and approval.

## **SECTION 205 BID PHASE**

205.1 One set of bid documents sealed in accordance with state statutes and regulations must be submitted to the OSF. Plans may be paper or in electronic format.

205.2 The design professional must submit a copy of all addenda to the OSF.

205.3 The design professional must submit a status of all outstanding permits and approvals to the OSF. Any changes to documents previously reviewed and approved for permitting purposes must be resubmitted to the approving authority and the status of the resubmittal noted to the OSF.

## **SECTION 206 CONSTRUCTION PHASE**

206.1 Any change order or change directive not limited to time must be submitted to the OSF by the design professional with a code impact statement prior to execution of the change order or change directive. Any changes to documents previously reviewed and approved for permitting purposes must be resubmitted to the approving authority and the status of the resubmittal noted to the OSF. Change orders and change directives having a code impact or a change in permit status require the OSF approval before execution.

206.2 Any reply to a contractor's request for information that results in a corrective action, clarification or bulletin drawing not resulting in a change order but having a code impact must be submitted to the OSF prior to giving the contractor notice to proceed. Any changes to documents previously reviewed and approved for permitting purposes must be resubmitted to the approving authority and the status of the resubmittal noted to the OSF. Corrective action, clarification or bulletin drawings having a code impact or a change in permit status require the OSF approval prior to giving the contractor notice to proceed.

206.3 Inspections During Construction: The design professional must request an inspection by OSF prior to closing rated construction and other concealed areas for inspection of fire and smoke protection measures. Reference material to be available at the site must include:

1. Red lined drawings;
2. Change directives with supporting documentation;
3. Change Orders with supporting documentation;
4. RFI's with supporting documentation;
5. Bulletin drawings;
6. Reviewed submittals and shop drawings;
7. Current deficiency log with Chapter 1 and 17 inspection reports.

206.3.1 The design professional must verify all work is complete and ready for inspection prior to notifying the OSF.

206.3.2 The design professional must provide at least one weeks' prior notice for the inspection.

206.3.3 Phased inspections for large building can be scheduled. All work must be completed in each section before an inspection is made.

206.3.4 The design professional and contractor are required to attend the inspection. The design professional must invite representatives for the district, the contract inspector, the State Fire Marshal's office and the local fire department to attend the inspection.

206.4 Substantial Completion: The design professional must request an inspection by OSF when the contractor has reached substantial completion. Reference material to be available at the site must include:

Reference material to be available at the site must include:

1. Red lined drawings;
2. Change directives with supporting documentation;
3. Change Orders with supporting documentation;
4. RFI's with supporting documentation;
5. Bulletin drawings;
6. Reviewed submittals and shop drawings;
7. Current deficiency log with Chapter 1 and 17 inspection reports.

206.4.1 The design professional must verify the work is substantially complete and ready for inspection prior to notifying the OSF.

206.4.2 The following systems must be complete and all certification tests are complete prior to notifying the OSF.

1. Elevators;
2. Potable water;
3. Sanitary sewer;
4. Septic tank and drainfield system;
5. Fire Alarm;
6. Sprinkler Systems, Above Ground
7. Sprinkler Systems, Below Ground;
8. Other fire suppression systems

206.4.3 Inspections by specialty manufacturers for folding bleachers, communication systems, lightning protection systems, and other similar systems should be made before inspection is requested of the OSF and in all cases must be made before occupancy.

206.4.4 Inspections by SCDHEC for food service operations and SCDSS for early childhood areas should be made before inspection is requested of the OSF and in all cases must be made before occupancy.

206.4.5 The design professional should provide at least two weeks' prior notice for the inspection. The design professional must submit a completed and certified Form F4 at least 24 hours prior to the inspection.

206.4.6 Phased inspections for large building can be scheduled. All work must be completed in each section before an inspection is made. Inspection of whole building systems such as the fire alarm system must be made after the entire system is complete and tested and ready for inspection.

206.4.7 The design professional, contractor and a representative of the State Fire Marshal's office are required to attend the inspection. Representative(s) for the district, the contract inspector and the local fire department must be invited to attend the inspection.

206.4.8 The OSF will provide written record of the inspection and any deficiencies noted will be provided to the design professional. Significant deficiencies may require reinspection for approval.

**206.4.9** If multiple occupancy inspections are required due to incomplete work or excessive deficiencies, the OSF reserves the right to charge the design professional, the construction/program manager and/or the contractor for the cost of additional services, including time and mileage costs.

**206.5 Certificate of Occupancy:** The OSF must issue a written Certificate of Occupancy before occupancy of a building is permitted. Before the Certificate can be issued, the following conditions must be met.

**206.5.1** The design professional has verified the work is substantially complete.

**206.5.2** The OSF has inspected the work and concurs with the design professional that the work substantially complete and all life safety systems are operating as required by the code. Additionally, all areas of the building and site are free of any apparent life safety hazard and egress is not compromised.

**206.5.3** The design professional, district and the OSF have agreed to a date for project closeout.

**206.6 Project Closeout:** All outstanding documentation must be submitted to the OSF at project closeout.

**206.6.1** All required permits and approvals have been received and copies have been transmitted to the OSF.

**206.6.2** The design professional has submitted the completed Form F5.

**206.6.3** The design professional has submitted certification that any remaining minor deficiencies not requiring the OSF reinspection are complete.

## DIVISION ~~23~~

### SITE ~~SELECTION~~ACQUISITION, DEVELOPMENT, AND DISPOSAL

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#### SECTION ~~23~~02 SITE APPROVAL~~EVALUATION AND APPROVAL OF SITE~~ ACQUISITION OR LEASE

##### ~~202.1 Subject to Approval before Acquisition~~

~~2302.1.1~~ All real property subject to acquisition by a district, whether unimproved land or land with existing improvements, for purchase or for lease, must~~shall~~ first be approved by the Office of School Facilities (OSF). All property must~~shall~~ be acquired as per state statute.

##### ~~202.2 On-site Inspection before Acquisition~~

~~202.2.1~~ Site inspections shall~~must~~ be made of all property prior to acquisition. ~~If the district has selected a design professional, he shall be present at the site inspection. The design professional, if engaged by the District, should be present at the site inspection along with a representative of the District, a representative of SCDOT Traffic Engineering Division and all other interested parties.~~

~~202.2.2~~ A boundary map of the property shall be furnished to the OSF and SCDOT at inspection. If present, wetland areas shall be shown on the map.

~~202.2.3~~ Any property being considered shall be checked through the Flood Mitigation Office of South Carolina Department of Natural Resources and applicable FEMA Flood Insurance Rate maps to determine if the site is in a flood zone and, if so, the effect on insurance rates and related considerations.

~~202.2.4 Leased Property:~~ All real property (land) leased by a district for the purpose of permanent capital improvements by the district shall be approved by the OSF. The lease is recommended for a minimum sufficient time for any proper capital improvements depreciation. Shorter leases for transitional facilities and relocatable classrooms will be allowed at the discretion of the district.

##### ~~202.3 Written Approval before Acquisition~~

~~202.3.1~~ In all cases, where the OSF approval is required, after tentative approval of site by the OSF, the district superintendent shall submit the Form F 2, "Application for Approval of Property Acquisition" to the OSF and DOT for final approval. A boundary plat prepared by a registered land surveyor indicating acreage, bounds, adjoining roads, and other pertinent information shall be

~~attached to form. Surveyor shall provide GEO-positioning reference data for locating site.~~

~~202.3.2 See DIVISION 13 for "SAMPLE FORMS"~~

~~302.3 Reference Form 2A for information to be reviewed during the site inspection. Provide the following information to the extent information is available:~~

- ~~1. Boundary map or plat indicating wetlands or other special areas of interest;~~
- ~~2. Aerial map showing roads adjacent to the proposed property;~~
- ~~3. Buildings plans if a structure is existing;~~

~~302.4 A written copy of the Form F2A along with the written report with recommendations from SCDOT will be returned to the District.~~

~~302.5 On a site where a septic tank system is planned, the District must receive preliminary approval from SCDHEC Division of Onsite Wastewater Management before site acquisition can be approved by the OSF.~~

~~302.6 If, after consideration of the recommendations by the OSF, SCDOT, and any other resources the District engages in order to exercise due diligence when evaluating the property, the District elects to proceed with the acquisition or lease, the District must submit the Form F2 with the following supporting documentation:~~

- ~~1. Boundary plat prepared by a registered land surveyor indicating acreage, bounds, adjoining roads, wetlands and flood plain information and other pertinent information;~~
- ~~2. Topographic information, if available;~~
- ~~3. Phase 1 Environmental Report;~~
- ~~4. Phase 2 Environmental Report, if required;~~
- ~~5. Geotechnical Report, if available;~~
- ~~6. DOT Site Traffic Report;~~
- ~~7. Form F2A OSF Site Evaluation.~~

## **~~202.4 Local Government Comprehensive Planning~~**

~~202.4.1 The school district is required by South Carolina Code Ann. §6-29-540 (supp.1999) to comply with local zoning ordinances and to consult with the local planning commission as to the compatibility of the proposed school site with the comprehensive plan of the community. If the local planning commission finds the proposal to be in conflict with the comprehensive plan, the school district may proceed with the project as long as the district publicly states its intention to proceed and the reason. A copy of this finding must be sent to the local governing body, the local planning commission, and published as a public notice in a newspaper of general circulation.~~

## **~~202.5 Parking~~**

~~202.5.1 Parking is determined by local zoning ordinance. In the absence of a local zoning ordinance, districts may use Table 801.2.1 of the International Zoning Code as a minimum.~~

## **SECTION 2303 SCHOOL SITES**

~~2303.1~~ South Carolina Code Ann. § 59-23-250 (Supp. 2009) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties. The OSF encourages Districts to utilize the “Best Practice for Site Selection and Planning” available from the OSF when considering a site for acquisition or lease. Recommendations by the Council of Educational Facility Planners International (CEFPI) may also provide valuable information for the District to consider when evaluating property.

~~203.2~~ The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).

~~303.202.4.1~~ The school district is required by South Carolina Code Ann. § 6-29-540 (supp. 1999) to comply with local zoning ordinances and to consult with the local planning commission as to the compatibility of the proposed school site with the comprehensive plan of the community. In the event the planning commission finds the proposal to be in conflict with the comprehensive plan, the commission must transmit its findings and the particulars of the nonconformity to the District. If the District determines to go forward with the project which conflicts with the comprehensive plan, the School Board must publicly state its intention to proceed and the reasons for the action. A copy of this finding must be sent to the local governing body, the local planning commission, and published as a public notice in a newspaper of general circulation in the community at least thirty days prior to awarding a contract or beginning construction. If the local planning commission finds the proposal to be in conflict with the comprehensive plan, the school district may proceed with the project as long as the district publicly states its intention to proceed and the reason. A copy of this finding must be sent to the local governing body, the local planning commission, and published as a public notice in a newspaper of general circulation.

#### **~~SECTION 204—ROADWAY IMPROVEMENTS~~**

~~303.3~~ Parking is determined by local zoning ordinance. In the absence of a local zoning ordinance, districts may use Table 801.2.1 of the International Zoning Code or other code as approved by the OSF.

~~303.204.1 General:~~ Roadway improvements requisite to access requirements and adequate to address any potential safety hazards are the responsibility of the school district. Districts must consider both the cost and impact to schedule when considering a site. The SCDOT ~~shall~~must be consulted for roadway improvements whenever stacking loops or access to a school is modified, or whenever a new school is planned, or an addition that increases the number of students is planned. Access to a school site ~~shall~~must be as defined by the South Carolina Department of Transportation (DOT) Traffic Engineering Division, as part of the application process for an encroachment permit. Chapter 4: “School Access Design” in the 2008 *Access and Roadside Management Standards* developed by the DOT’s Traffic Engineering Division provides additional criteria.

~~303.4.1~~ County or State road frontage must be ample enough to allow for separate car and bus entrances and exits, unless otherwise agreed to in conjunction with DOT and/or the appropriate city/county authority.

~~303.4.2~~ On-site school bus traffic must be physically separated from visitor, parent, and student traffic at all schools unless approved by the OSF.

~~303.4.3~~ School automobile and bus loops must operate in a one-way counterclockwise direction or in a manner that assures that the loading/unloading of students occurs from the right hand side of the vehicle adjacent to the building to prevent pedestrians from crossing traffic lanes.

**303.4.4** A site plan showing traffic and parking improvements must be submitted to and approved by DOT Traffic Engineering Division prior to bidding the project. The current Form F6 School Transportation Information Form must be shown on the site plan. This approval is required for any improvement affecting traffic or parking on or adjacent to the site, even if the work does not require an encroachment permit. Technical assistance necessary to this objective is available from the DOT, Traffic Engineering Division.

**303.5** Pedestrians and bicyclists must have a designated safe path between the adjacent roads, school drives, parking areas and the school building.

#### **204.2—Cost of Improvements**

**204.2.1**—Preliminary cost estimates for roadway improvements are recommended to be prepared by the district prior to the site acquisition for inclusion in the project budget. The site plan showing such improvements shall be submitted to and approved by DOT Traffic Engineering Division prior to bidding the project.

**204.2.2**—Technical assistance necessary to this objective is available from the DOT, Traffic Engineering Division.

### **SECTION 205—EXISTING SITES RELATED TO BUILDING ADDITIONS**

**205.1**—When additions are made at an existing site, plans shall include site improvements necessary to separate all traffic as set forth in Section 208, Site Development Factors unless otherwise waived by the OSF.

**205.2**—Any site considered for additions shall be checked with the Flood Mitigation Office of the South Carolina Department of Natural Resources and/or the respective local jurisdiction to determine if the existing site is in a flood zone and, if so, the effect on site designs, building design, and insurance coverage.

### **SECTION 206—SITE SELECTION PROCESS AND FACTORS**

**206.1**—The district, after careful consideration of all factors, should select the tentative site for inspection by the OSF. In some cases, more than one site may be considered and a comparative evaluation made jointly by the district and the OSF before final selection.

**206.1.1**—OSF may rely upon the following agencies for site reviews:

**206.1.1.1**—Architect, landscape architect, professional engineer, or construction manager

**206.1.1.2**—DHEC district engineer

**206.1.1.3**—Department of Transportation, Traffic Engineering Division

**206.1.1.4**—Local or regional planning agency

**206.1.1.5**—Local or regional zoning agency

**206.1.1.6**—Natural Resources Conservation Service

**206.1.1.7**—Local law enforcement agency

**206.1.1.8**—S.C. Department of Natural Resources

~~206.1.1.9—S.C. Department of Education transportation area supervisor~~

~~206.1.1.10—DHEC—Division of Onsite Wastewater Management~~

## **206.2—Site Selection Factors**

~~206.2.1—The site selection process shall take into consideration all natural and/or man-made features. Any potential environmental hazard such as air, water or soil contamination shall be considered. If a hazard is suspected, it shall be researched or tested by DHEC or other qualified verified engineers or laboratories.~~

~~206.2.2—Access: County or State road frontage shall be ample enough to allow for separate car and bus entrances and exits, unless otherwise agreed to in conjunction with DOT and/or the appropriate city/county authority.~~

~~206.2.3—Electric Transmission Power Lines: Transmission lines shall not cross any portion of a school site unless approved by the OSF. The following setbacks shall act as a *Guide* for establishing what is appropriate for school facility sites. The setback shall be measured from the edge of the easement and/or right of way nearest to the property line of the parcel to be used for educational purposes and shall be calculated based on both the existing kilovolt designation plus any anticipated increase in kilovolts.~~

<del>Kilovolt Designation</del>	<del>Setback</del>
<del>100-115 kV</del>	<del>100 Feet</del>
<del>220-235 kV</del>	<del>150 Feet</del>
<del>345 kV</del>	<del>250 Feet</del>

~~206.2.3.1—These setbacks shall not include any permanent improvements unless approved by the OSF. Setbacks should only be utilized for vehicular or pedestrian passage, if needed.~~

~~206.2.4—On those sites where a septic tank system must be considered, the District shall not proceed with land acquisition or plan preparation until receiving preliminary approval from DHEC Division of Onsite Wastewater Management.~~

## **SECTION 304 EXISTING SITE ADDITIONS OR CHANGES**

~~**304.1** When additions or changes are made to an existing site, the additions or changes must comply with the requirements of this Division.~~

## **SECTION ~~207~~305 LAND DISPOSAL**

~~**207**305.1 In accordance with §59-19-190, the reassignment or disposal of land purchased with any state funds after 1952 ~~shall~~must be subject to the prior written approval of the State Board of Education. Request for disposition of such parcels ~~shall~~must be made through the OSF for submission to the State Board of Education.~~

~~**207.305.2** Parcel(s) may contain internal roads identified as being on the State Highway System regardless of purchase date. These are roads that are owned and maintained by the SCDOT and will require the SCDOT to remove the road(s) from the system prior to the disposal of the property. Therefore, the SCDOT would like the opportunity to remove the road(s) from the system prior to the disposal of the property.~~ Providing a boundary survey (if available) of the parcel with the disposition request to the OSF will aid the SCDOT in determining if any road(s)

are on the State Highway System. ~~Owners may determine that retaining the state road is in their best interest.~~

## **~~SECTION 208—SITE DEVELOPMENT FACTORS~~**

**~~208.1~~**—School buildings shall be setback on the site a sufficient distance from the adjacent roadways to ensure safe and adequate on-site storage or stacking of loading and unloading vehicles.

**~~208.2~~**—On-site school bus traffic shall be physically separated from visitor, parent, and student traffic at all schools unless approved by the OSF.

**~~208.3~~**—School automobile and bus loops shall operate in a one-way counterclockwise direction or in a manner that assures that the loading/unloading of students occurs from the right hand side of the vehicle adjacent to the building.

**~~208.4~~**—Design layout of bus circulation and parking areas shall be done to prohibit the backing-up of busses on school sites.

**~~208.5~~**—Each parking stall for a full-sized bus shall be a minimum of 15 feet wide. Smaller spaces may be provided for mini-busses and other specially-sized vehicles used to transport students. Submit Form F7 “Preliminary School Bus Transportation Information Form” with the initial design submittal to the OSF. Form F7 is in Division 13 of this *Guide*.

**~~208.6~~**—Student parking areas shall be separated from staff/visitor/bus parking and student loading/unloading areas.

**~~208.7~~**—Pedestrians from student parking areas should not be allowed to cross automobile and bus traffic loops to reach the school building unless approved by the OSF.

**~~208.8~~**—Pedestrians and bicyclists shall have a designated safe path between the adjacent road and the school building.

## DIVISION **43**

### DESIGN CRITERIA

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#### SECTION **3402** GENERAL

**3402.1** Educational program delivery in the State of South Carolina is in a period of transition, especially in certain program areas, such as Special Education and Career and Technical Education. The Office of School Facilities is studying current and potential educational program delivery models in an effort to insure that the State Guidelines are flexible and responsive. During this transition a district may request a deviation by the OSF from the minimum standards. That request must be accompanied by educational specifications that detail the intended educational program, effects of the program on the facility capacity, the requested space requirements, and the rationale for the request. The National School Boards Association (NSBA) states that “the purpose of educational specifications is to define the programmatic, functional, spatial, and environmental requirements of the educational facility, whether new or remodeled, in written and graphic form for review, clarification, and agreement as to scope of work and design requirements for the architect, engineer, and other professionals working on the building design.” For information on developing Educational Specifications please consult the *CEFPI Guide for Educational Facility Planning—Creating Connections*, 2004, Council of Educational

Facility Planners, International. The OSF encourages Districts to utilize the “Best Practices for Instructional Space” available from the OSF when planning instructional and support spaces. Recommendations by the Council of Educational Facility Planners International (CEFPI) may also provide valuable information for the District to consider when planning.

402.23 Design professionals are reminded that design criteria in Title II of the Americans with Disabilities Act (ADA) and the ADA Accessibility Guidelines (ADAAG) for buildings and facilities may be more stringent.

402.3 Maximum occupancy for all assembly occupancies and any other spaces designated by the OSF or the State Fire Marshal must comply with the IBC 1004.3

## **SECTION 3403 SPECIAL REQUIREMENTS FOR INSTRUCTIONAL EDUCATIONAL SPACES**

### **3403.1 Art Interior Classrooms**

**3403.1.1 General:** Facilities appropriate to the schools art education program shall be provided for all schools. A well-planned art room must provide for the following activities: graphic art, which includes computer graphics, block printing, etching, and lithograph; such general crafts as, metals, weaving, and three dimensional art forms such as ceramics and sculpture. An interior classroom or other instructional space that does not have access to daylighting must be limited to spaces such as art or music where students will occupy for one or two class periods unless approved by the OSF.

403.1.2 Interior classrooms must be mechanically heated and cooled and provided with emergency lighting.

### **303.1.2—Elementary School**

303.1.2.1 There shall be a minimum of one art room for each school. The art room shall have at least 40 square feet of workspace per student.

303.1.2.2 At least one wall shall be provided for displaying student work.

303.1.2.3 A wet area with sink is required.

303.1.2.4 Art rooms serving kindergarten/child development units and first grade classrooms shall be located on the level of exit discharge.

### **303.1.3—Middle School**

303.1.3.1 There shall be a minimum of one art room for each school. The art room shall have at least 50 square feet of workspace per student, excluding storage and teacher's workspace.

303.1.3.2 The art room shall be flexible enough for use with groups or individual instructional activities. Adequate space shall also be planned for special furniture and

equipment, i.e., easels, potters wheels, floor looms, darkroom developing tanks, and enlargers or as outlined in district education program.

**303.1.3.3**—A wet area with sink is required.

**303.1.3.4**—At least one wall shall be provided for displaying student work and visual aids.

#### **303.1.4—High School**

**303.1.4.1**—There shall be a minimum of one art room for each art program (i.e., 2.d, 3.d, graphic arts, etc.) for each school. The art room shall have a minimum of 55 square feet per student, excluding storage and teacher's workspace.

**303.1.4.2**—At least one wall shall be designed for displaying student work and visual aids.

**303.1.4.3**—A secondary exhaust fan shall be provided in the art room for periodic use to remove fumes.

**303.1.4.4**—A wet area shall be required where program requires.

#### **303.1.5—Kiln Room**

**303.1.5.1**—Provide a special wiring circuit to meet kiln manufacturer's requirements. There shall be a minimum three feet wide working border around any kiln, unless the manufacturer allows less. State and local codes must be met.

**303.1.5.2**—The kiln room shall be ventilated to the outside to remove fumes, as well as heat build-up.

**303.1.5.3**—The wall and/or ceiling around the kiln space shall be 1-hour rated with ¾-hour label doors and sealed tight to the roof deck over or have a 1-hour horizontal assembly. Where a fire sprinkler system is provided, the rated wall and/or ceiling and door may be eliminated. These walls shall remain sealed tight to the deck.

**303.1.5.4**—Provide the kiln room with a proper fire extinguisher within five feet of the outside edge of the entry door to the space.

#### **303.1.6—Storage Area**

**303.1.6.1**—Art rooms require storage space with appropriate shelving. Provide 400 square feet minimum of storage.

#### **303.1.7—Sinks**

**303.1.7.1**—Sinks shall be equipped with hot and cold running water, fitted with mixing faucets. Sinks shall be stainless steel or some material that does not chip, crack, or break. They shall be surrounded with a waterproof work surface. Heavy duty drains with clay or plaster traps shall be used in order to prevent clogging. They shall be large enough to accommodate several students at one time.

### **303.2—Classrooms**

#### **303.2.1—General Classrooms**

**303.2.1.1—Basic requirements:** ~~The following shall be mandatory and minimum unless otherwise indicated. Classroom sizes shall be determined by student to teacher ratio and use of space, but shall not be less than the minimum areas listed.~~

<b>Item</b>	<b>Elementary</b>	<b>Middle, Junior High, Senior High</b>
Floor Area	800 SF minimum	Same as Elementary
Minimum width	24 ft.	Same as Elementary
Individual Toilets	Grades 1-2: Same as Kindergarten Grade 3: Optional Grades 4-6: Not Required	Not Required
Sink Cabinets	Grades 1-3: Required Grades 4-6: Recommended	Not Required

**303.2.1.1.1—Sink Cabinets:** ~~Recommended height in kindergarten classrooms shall be 2' 1". Recommended height in grades 1-3 shall be 2' 3". Recommended height in grades 4-6 shall be 2' 6". Recommended height in grades 7-12 shall be 3' 0".~~

**303.2.1.2—Floor Area:** ~~Shall be clear, open area exclusive of toilet rooms. However, the area covered with mandated cabinetry may be included within the 800-square-foot minimum. Provisions for computer technology may require an increase in area in classrooms.~~

**303.2.1.3—Location:** ~~First grade classrooms shall be located on ground level. Second grade classrooms shall not be higher than the second floor.~~

#### **303.2.2—Interior Classrooms**

**303.2.2.1—Definition:** ~~An “interior” classroom is hereby defined as a classroom or other instructional space that does not adjoin an exterior wall and does not have windows or direct egress to exterior.~~

**303.2.2.2—Elementary Schools:** ~~Interior classrooms shall not be permitted except in the following situations:~~

**303.2.2.2.1** ~~For art, music, resource rooms, or for upper grade classrooms where students will spend only one or two periods.~~

**303.2.2.2.2** ~~When interior elementary classrooms are permitted, they shall meet the criteria stipulated for secondary classrooms below.~~

**303.2.2.3—Secondary Schools:** ~~Interior classrooms are permitted under the following conditions:~~

~~303.2.2.3.1—Space shall be mechanically ventilated and shall be equipped with emergency illumination if there is no natural light. See DIVISION 12—ELECTRICAL.~~

~~303.2.2.3.2—Two means of egress shall be provided, one of which must open directly to an exit access corridor. However, only one means of egress will be required from instructional spaces not exceeding 500 square feet in floor area. It is desirable that the second egress also open to a corridor, in which case it shall be as remote from the first egress as possible, and preferably on a different wall from the first egress.~~

~~303.2.2.3.2.1—The second egress shall be permitted to open to another space (such as, a classroom) that preferably in turn has direct egress to a different exit access corridor, in which case a plastic or metal placard shall be attached to each side of the door with non-removable screws stipulating that no lock is permitted and that clear passage must be maintained at all times. However, this arrangement is not generally recommended and should only be used upon specific approval by the district superintendent because of additional sound transmission problems, and lack of security from one space to another. If occupancy of one space exceeds 50 persons or distance of travel exceeds 75 feet, the second egress shall open to an exit access corridor.~~

### **303.2.3—Specialized Classrooms**

#### **303.2.3.1—Self-Contained Classrooms**

~~303.2.3.1.1—Classroom Size: A minimum sized classroom of 800 square feet, exclusive of toilet rooms shall be provided in all cases where the anticipated enrollment will approach 15 elementary or 18 secondary students.~~

#### **303.2.3.1.2—Plumbing Requirements.**

~~303.2.3.1.2.1—Unless otherwise waived by the OSF, individual toilet rooms shall be provided in all elementary self-contained classrooms and shall contain a water closet and lavatory and shall be designed for wheelchair use. The width of the toilet room must allow for side transfer from wheelchair to water closet.~~

~~303.2.3.1.3—Sink cabinets shall be included in all elementary self-contained classrooms. Counter height should be determined by the age level expected to occupy the room (See 303.2.1.1).~~

#### **303.2.3.2—Resource Rooms**

~~303.2.3.2.1—Enrollment: Six to eight students generally.~~

~~303.2.3.2.2—Room Size: 360-400 square feet (half the size of a regular sized classroom) will accommodate typical student groupings.~~

~~303.2.3.3—Time-out Rooms. If time out rooms are provided, they shall meet the requirements of the Office of School Facilities' Policy Memorandums.~~

### **303.3.2 Early Childhood and Kindergarten and Child Development Classrooms**

403.2.1 The electrical outlets must be of the tamper resistant type or be provided with blank plastic safety plugs.

403.2.2 Classrooms for 4K and younger monitored under the Child Development Education Pilot Program (CDEPP) must meet the requirement of SC Department of Social Services in addition to the requirements of this *Guide*.

~~303.3.1—Location:~~ Kindergarten and Child Development Units shall be located on the ground floor level and be in a common area near drop-off points.

### ~~303.3.2—Kindergarten and Child Development Classroom Area~~

~~303.3.2.1~~ Floor area shall be a minimum of 1,050 square feet (net), exclusive of the teacher's workroom (optional), toilet, and storage room. Mandated cabinetry may be included in this area.

~~303.3.2.2~~ The minimum width shall be 24 feet.

~~303.3.2.3~~ Each classroom shall have a counter equipped with a minimum of one sink at student height and one at adult height. Minimum length of counter shall be 12 feet. Counter top sink(s) shall be stainless steel or porcelain. A bubbler shall be provided.

~~303.3.2.4~~ "Cubby" units with a coat hook and a storage cubicle for each student shall be provided.

~~303.3.2.5~~ Teacher Work Rooms are recommended to be placed throughout the school to allow for peer collaboration, team planning, etc.

### ~~303.3.3—Individual Classroom Toilets~~

~~303.3.3.1~~ One toilet serving as a unisex arrangement, and opening into the classroom, shall be required as a minimum for every Kindergarten/Child Development classroom, unless group toilets sufficient to meet total student population are provided, in which case one toilet serving every two classrooms will be allowed. A hand wash sink shall be required either in the toilet or directly outside the toilet in each classroom.

~~303.3.3.2~~ All of the individual toilet rooms are not required to accommodate people with physical disabilities. Provide at least 25 percent, but in no case less than 2 toilets for people with physical disabilities per Kindergarten/Child Development area and/or wing.

### ~~303.3.4—Enclosed Play Yard~~

~~303.3.4.1~~ An enclosed play yard shall be provided, sufficient to accommodate the expected student population. Pedestrian gates shall be provided to the enclosure.

~~303.3.5~~ The electrical outlets in kindergarten rooms shall be of the tamper resistant type or be provided with blank plastic safety plugs.

~~303.3.6~~ Early Childhood Environmental Ratings Scale (ECERS) and Infant and Toddler Environment Rating Scale (ITERS): Both ECERS (2 ½—5 years of age) and ITERS (below 2 ½ years of age) utilize more stringent standards than this *Guide*. The design professional is recommended to verify with the school district if it plans to incorporate these standards.

### **303.4—Media Centers**

**303.4.1**—The State Department of Education, through its School Library Media Services office, is available to review library media center plans for school districts.

**303.4.2**—Every school shall have a library/media center of a size commensurate with the long-range student population of the school and sufficient to house the minimum required materials specified by the Southern Association of Colleges and Schools. Media centers serving kindergarten/child development units and first grade classrooms shall be located on the level of exit discharge.

### **303.4.3—Reading Rooms**

**303.4.3.1**—The minimum size of the reading room for each media center shall be determined as follows:

**303.4.3.1.1—Elementary:** For schools having an enrollment of up to 1,000 students, 10 percent of the enrollment multiplied by 30 square feet, with a minimum size being 1,200 square feet.

**303.4.3.1.2—Secondary:** For schools having an enrollment of up to 2,000 students, 15 percent of the first 400 students plus 10 percent of the remainder, the total to be multiplied by 30 square feet.

**303.4.3.1.3**—For schools having enrollments in excess of the above, the additional area required shall be determined by the district, based on students to be seated at any one time, volumes to be accommodated, and type of programs expected to be utilized.

**303.4.3.2**—The librarian shall have visual control of the entire facility.

### **303.4.4—Office/Workroom**

**303.4.4.1**—These areas shall be required in all media centers and are most often combined, although in larger secondary schools a separate office may be desired. Recommend an area a minimum of 180 square feet in smaller schools and up to 250 square feet in larger schools.

**303.4.4.2**—Generous glass area shall be provided for overview of reading room.

**303.4.4.3**—Shall have 36 inch high work counter with stainless steel double sink and swing faucet with hot and cold water.

### **303.4.5—Conference Room(s)**

**303.4.5.1**—A minimum of one shall be required in all media centers, with two recommended in larger elementary schools and two or more in larger secondary schools.

### **303.4.6—Audio-Visual (AV) Storage Space**

**303.4.6.1**—Secure AV storage space shall be required in all media centers.

### **303.4.7—Main Technology Distribution Room**

**303.4.7.1**—A secure main distribution room (space where major components of technology

hardware and networked systems interconnect to each other and to other systems external to the school) shall be in all schools. Size, location, and security shall be determined by program requirements. Heat load shall be established for the equipment in order that proper ventilation can be provided.

### **303.5— Music**

**303.5.1— General:** Facilities designed specifically for music education shall be planned for all schools. The music facilities shall be adequate to accommodate the variety of activities and experiences.

**303.5.2— Elementary School:** The facilities provided for the music program in the elementary school shall meet the following standards:

**303.5.2.1**— A room shall be designed for teaching general music. This room shall have appropriate acoustical properties and be large enough to accommodate the largest group taught and provide ample space for physical movement. It shall also contain storage space for the necessary materials, classroom instruments and equipment. One thousand (1,000) square feet of floor space shall be minimum size.

**303.5.2.2**— This room shall be specifically designed to provide a quiet environment; room acoustics for critical listening and ventilation rate should be appropriate for the space.

**303.5.2.3**— Lockable cabinets or a secured storage room shall be provided for the various large and small instruments.

**303.5.2.4**— Music rooms serving kindergarten/child development units and first grade classrooms shall be located on the level of exit discharge.

**303.5.3— Middle/Junior High:** The facilities provided for music programs in grades 6–8 or 7–9 shall meet the following standards:

**303.5.3.1**— Music rooms shall be available for teaching general music, vocal music, and instrumental music (band/orchestra). If there is more than one music educator, there shall be a rehearsal room for instrumental groups and another rehearsal room for choral groups.

**303.5.3.2**— Each room in which music is taught shall be acoustically treated to provide appropriate sound dispersion and reverberation. Each room shall be acoustically isolated. The vocal and instrumental areas shall be separated by an acoustical barrier or wall.

1. **Shared Music Room:** 1,800 square feet minimum for combined programs
2. **Band/Orchestra Room:** 1,800 square feet, minimum 20 square feet per student
3. **Choral Rehearsal Room:** 1,200 square feet, minimum 12 square feet per student (If risers are built in, they are to be 40" wide with a 6" rise; removable risers are recommended.)
4. **Ensemble Rooms:** At least one 300 square feet room
5. **Practice Rooms:** 55 square feet for each 30 students in the largest capacity music space
6. Office space shall be provided for each music teacher

**303.5.4— High School:** The facilities provided for the music of grades 9–12 shall meet the following standards:

**303.5.4.1**— Music rooms shall be provided for band/orchestra and chorus.

#### **303.5.4.1.1—Room size specifications:**

1. ~~Music Classroom: 1,000 square feet~~
2. ~~Instrumental Rehearsal Room: (band/orchestra) 2,100 square feet, minimum 25 square feet per student~~
3. ~~Choral Rehearsal Room: 1,400 square feet; minimum 15 square feet per student, risers 40" wide with 6" rise~~
4. ~~Ensemble Rooms: 350 square feet~~
5. ~~Practice Rooms: Where required, 55 square feet for each 30 students in the largest capacity music space~~
6. ~~Instrumental Storage Room: 400 to 500 square feet with shelves and cabinets, located for ease of access to rehearsal area, secured~~
7. ~~Band Uniforms Storage Room: 100 square feet minimum with appropriate garment cabinets; room secured~~
8. ~~Choral Program Storage: 200-300 square feet with facilities for choral robes, blazers, a sound system and portable standing risers~~
9. ~~Music Library: 100-150 square feet with space for filing cabinets, sorting racks, counters and storage cabinets; room secured~~
10. ~~Office Space: 100 square feet minimum for each music educator~~

#### **303.6—Physical Education**

**303.6.1—General:** ~~Facilities designed specifically for the physical education program shall be included in all schools. The facilities shall be determined by the instructional needs of physical education program and number of students to be served. Additional considerations shall be determined by the needs of the athletic program and the needs of the community. Therefore, the facilities shall be adequate to accommodate a variety of activities; experiences and a teaching station shall be available for a class regardless of weather considerations. Both indoor and outdoor facilities shall be provided.~~

#### **303.6.2—Elementary Facilities**

**303.6.2.1—General:** ~~The indoor activity space shall give basic consideration to the primary age group using the facility, including consideration for persons with physical disabilities. Community and spectators are of less importance. The gymnasium and/or multi-purpose room shall be apart from classrooms to reduce noise and accessible to parking area and outdoor activity space and fields.~~

**303.6.2.1.1—Gymnasium:** ~~Basketball courts should be sized by the district with a minimum size to be 42' x 74' with a minimum of six (6) safety perimeter, or a minimum area of 54' x 86'. Large size equals 82' x 94', this size will accommodate a basketball court and can be divided by a folding partition. The large size shall be used if two indoor teaching stations are needed. There shall be a minimum of 22 feet clear above the floor.~~

**303.6.2.1.2** ~~—A storage area of no less than 300 square feet shall be provided for the gym. Doors shall be wide enough for easy access to mats and apparatus.~~

**303.6.2.1.3** ~~—Instructors shall have a minimum 100 square feet office.~~

**303.6.2.1.4** ~~—The Multi-purpose room can serve as an adequate instructional facility and activity space for the elementary students, particularly for grades K–3. It shall be no less than 2,400 square feet (40' x 60'), a rectangular shape is preferred. A minimum of 14 feet clearance for ceiling height shall be provided. The wall space shall be free from obstruction~~

to 10 feet and hard and smooth. Storage space and office space shall be the same as for a gymnasium.

**303.6.2.1.5—Outdoor Activity Space:** Three types of activity spaces are required for the physical education program. Outdoor play areas shall be located so there is no interference with traffic and pedestrians.

**303.6.2.1.5.1**—A field space composed of a level well-graded turf area with a minimum size of 80'x100' shall be suitable for one teaching station.

**303.6.2.1.5.2**—An asphalt/synthetic activity space shall be required. It is recommended the minimum size be 2,400 square feet.

**303.6.2.1.5.3**—Separate age appropriate playgrounds shall be designed for early elementary and upper elementary grades.

### **303.6.3—Secondary Facilities**

**303.6.3.1—General:** The secondary school physical education facilities shall reflect curriculum and instructional needs of students and provide adequate activity space.

**303.6.3.2—Gymnasium:** Basketball courts should be sized by the district with a minimum size to be 50' x 84' with a minimum of six (6) feet safety perimeter on the sides and ten (10) feet safety perimeter at each end for a minimum area of 62' x 104'. Adequate space shall be added for bleachers depending on type and brand being used. The design of bleachers shall be in accordance with IBC. Walls shall be hard and smooth up to 10 feet and free from obstruction. There shall be a minimum of 22' clear above the floor.

**303.6.3.2.1**—Double doors shall lead off the gym floor into apparatus storage room. Storage of no less than 400 square feet shall be provided for the gym.

**303.6.3.2.2**—Office space shall be a minimum 120 square feet. (Provide a separate shower, lavatory and water closet for instructors.)

**303.6.3.2.3**—The locker rooms shall provide a minimum of 15 square feet per pupil. The floors shall be of slip resistant materials.

**303.6.3.2.4**—Showers shall be provided in accordance with Section 304.13.4 of this regulation. A shower master valve shall be provided at the coach's office.

**303.6.3.2.5**—A Physical Education Classroom (minimum 800 square feet) shall be provided.

### **303.7—Science Facilities**

#### **303.7.1—Elementary Schools**

**303.7.1.1—General:** A minimum of one (1,000 square feet minimum) science classroom shall be provided.

##### **303.7.1.2—Specific Requirements include:**

- 1.—One sink with running water
- 2.—Eye wash
- 3.—Ample counter space

4. Ample electrical outlets
5. Ample lockable storage for science materials
6. Ample shelving
7. Flat student desks
8. TV, telecommunications and computer wiring
9. Teacher's demonstration table
10. When grades 6, 7, and 8 are grouped as a middle school, then the 6<sup>th</sup>-grade science classes must be taught in a science laboratory facility.

### **303.7.2—Middle and Secondary Schools**

**303.7.2.1—General:** All science classes grades 7–12 shall be taught in or have access to classrooms designed specifically for student-oriented laboratory experiences. Features required for instructing all science classes regardless of the type of classroom design include instructor's demonstration desk, flat top student desk, and ample lockable storage space. All rooms shall be provided with acid-resistant waste lines.

#### **303.7.2.2—Specific Requirements:**

1. 1,200–1,400 square feet in middle schools, 1,600–1,800 square feet in high schools
2. Large 8–12 feet instructor's laboratory desk equipped with cold water, electrical, and gas outlets
3. Laboratory Stations
4. Computer stations
5. Sinks with cold water only
6. Electrical duplex outlets or strip outlets over all laboratory stations
7. TV, Telecommunications and computer wiring
8. Gas outlets (required in high schools only)
9. 1 large, acid-resistant, deep sink, hot and cold water
10. Combination eye wash and shower located in each laboratory
11. 1 large wall clock
12. Ample erasable dry boards recommended avoiding chalk dust
13. Ample bulletin board areas
14. Exhaust fan for fume removal
15. Ample lockable storage
16. Master water, and gas cut-off shall be located in the instructor's demonstration desk or close proximity. These shall be readily accessible to the instructor without the use of keys, special tools, etc., and shall be clearly labeled.
17. Acid and heat-resistant counter tops and sinks shall be provided for all laboratory furniture.
18. Fire extinguisher and fire blankets shall be provided.

**303.7.2.3—Separate Classroom/Lab Spaces:** Classrooms shall be 800 square feet and labs 1,000 square feet. Equipment would be the same as above.

#### **303.7.2.4—Laboratory Preparation Room**

**303.7.2.4.1**—At least 200–300 square feet of space shall be provided for a laboratory preparation room for each self-contained, perimeter, and regular science lab. It is highly desirable to locate a laboratory preparation room between two science laboratory facilities so that laboratory equipment and supplies can be shared. When the science facilities are designed in this manner, an area of 300–600 square feet shall be provided for laboratory preparation room.

403.2.3 Head Start classrooms for 4K and younger must meet the federal program requirements in addition to the requirements of this *Guide*.

## **SECTION ~~3404~~ OTHER SPECIAL REQUIREMENTSSUPPORT SPACES**

### **~~304.1~~ Bookrooms**

~~304.1.1~~—Every school shall have a minimum of one secured book storage room, with shelving anchored to meet all codes.

~~304.1.2~~—Mechanical ventilation shall be provided.

### **~~304.2~~ Cafeteria-Kitchens**

~~304.2.1~~—**General:** In reference to the design construction and maintenance of kitchens, food storage areas, food serving areas, cafeterias, and related spaces in public schools, DHEC has set forth their requirements in this regard in Regulation 61-25 entitled “Food Service Establishments.” Plan review is required by DHEC, Division of Food Protection, Bureau of Environmental Health.

### **~~304.2.2~~ Cafeteria**

~~304.2.2.1~~—Group toilets shall be located nearby for both student use and the public.

~~304.2.2.2~~—The State Department of Education, through its Office of School Food Services and Nutrition is available to review for comment school kitchen plans.

### **~~304.3~~ Corridors**

~~304.3.1~~—**Major Corridor** shall be defined as a corridor that serves more than four (4) instructional areas or more than 120 students.

~~304.3.1.1~~—The mandated minimum corridor clear width shall be 8' 0" for elementary schools and 10' 0" for secondary schools when classroom doors do not project into the corridor. Increase corridor widths to 9' 0" and 11' 0" when classroom doors project into corridor. These are minimum widths and wider sizes are recommended.

~~304.3.2~~—**Minor Corridor** is defined as one serving four instructional areas or less, or 120 students or less.

~~304.3.2.1~~—Minimum clear widths for “minor” corridors shall be 7 feet in elementary schools and 8 feet in secondary schools for corridors housing 4 instructional areas or 60 to 120 students. For corridors with just 2 instructional areas and 60 students or less, corridors shall be 6 feet and 7 feet respectively.

~~304.3.2.2~~—Lockers shall not be permitted in minor corridors.

~~304.3.2.3~~—**Tertiary corridor** shall be defined as the access way from rooms or areas not in the main line of travel and not serving as an egress way for more than 30 people (such as access to toilet rooms and access within office suites). Such passageways should be a minimum clear width of 4' 8".

**304.3.3**—The combined obstruction of doors on opposite sides of a corridor shall not reduce the required width of the corridor by more than 50 percent at any point during the opening process.

#### **304.4—Fire Walls and Fire-Rated Walls**

**304.4.1**—The following shall be included in the contract documents:

##### **304.4.2—Fire-rated Assemblies**

~~**304.4.2.1**—All components used in an assembly that is required to be rated shall be tested and certified to meet rating required as outlined in the IBC. Testing and certification shall be performed by an accepted testing lab (UL, Warnock Hersey, etc.). If a component that has not been tested is to be used, then the fire resistance of said component shall be established by alternative methods of determining fire resistance as allowed in Chapter 1 and 7 of the International Building Code and verified by the design professional. Documentation shall be present on site stating method for determining fire resistance and data showing compliance with required fire resistance rating. In an instance where tested concrete block or any other component of a rated assembly is required in a tested design assembly, components meeting the requirements of the current building code for the required fire resistance rating shall be accepted as equivalent to the components tested by a testing lab.~~

**304.4.3**—All firewalls and fire-rated walls shall be permanently identified on both sides with signs or stenciling above decorative ceilings and in other concealed areas. Suggested wording (X) HOUR FIRE AND SMOKE BARRIER PROTECT ALL OPENINGS. Fire walls are not to be used for the support of structure.

##### **304.4.4—Toilet Room Walls**

**304.4.4.1**—Fire rated bathroom/restroom doors are not required when opening onto fire rated halls, corridors, exit access provided:

**304.4.4.1.1**—No other rooms open off of the bathroom/restroom.

**304.4.4.1.2**—No gas or electric appliances other than hand dryers are located in the bathroom/restroom.

**304.4.4.1.3**—All perimeter walls, partitions, floor and ceiling of the bathroom/restroom have a fire rating at least equal to the rating of the hall, corridor or exit access.

**304.4.4.1.4**—The bathroom/restroom is not used for any other purpose than it is designed.

#### **304.5—Guidance**

**304.5.1—General:** Guidance counselors are mandated for all secondary schools in proportion to the enrollment; they are also provided for elementary schools under certain circumstances. The district shall instruct the architect as to the number of guidance personnel to design. Growth potential of the school shall also be taken into consideration when providing private offices for counselors.

**304.5.2—Location:** The guidance suite shall be near the main building entrance for convenience of parents, college or employment recruiters, district staff, and others involved in the counseling function. Guidance shall be either adjacent to the school administrative

area or in close proximity thereto, but in any case, the guidance suite shall have its own separate entrance from a corridor or lobby.

### **304.6—Health Units**

**304.6.1—General:** Health units shall be included in all schools, designed around the needs of the student population and the districts student, family and community health programs.

### **304.17 Lockers Spaces**

**304.7.1—Locker Layouts:** In a locker alcove (adjacent to hallways) and/or separate locker rooms, the isle width between faces of opposing lockers shall be 5' 6" minimum.

**304.1.17.2 Corridors:** Lockers located in corridors shall not reduce the required minimum corridor clear width of the exit including locker doors that swing into the corridors. Both locker sets and door widths must be outside the minimum required corridor width when lockers are located on opposite sides of the corridor as set forth in Section 304.3. Required clear widths of corridors shall be increased by one foot for corridors with lockers on one wall and two feet for corridors with lockers on two opposite walls. Open locker doors do not affect clear widths. No projections are allowed into the minimum corridor clear width with lockers.

### **304.8—Mechanical and Electrical Equipment Rooms**

**304.8.1—**Areas housing mechanical and/or electrical equipment shall be of sufficient size to accommodate the designed equipment and shall provide adequate clearances for servicing, repairing and/or replacing all equipment. Such areas and clearances shall meet all requirements of the Building Code as to fire protection, fire prevention, and exit requirements for personnel. Mechanical and electrical rooms shall not be combined with, or be a part of, storage or custodial areas.

**304.8.1.1—**Note that in sprinkler buildings, all electrical rooms must be sprinklered unless they qualify for an exception per NFPA 13.

**304.8.2—**Boiler rooms, furnace rooms, and other major mechanical rooms shall be separated from the remainder of the building by walls having a minimum fire resistance rating of two hours. It is recommended that no upper floor construction be placed over such areas due to safety and sound transmission, but if the architect elects to do so, then a ceiling/floor assembly having a minimum of three hours shall be provided. These rooms shall have doors opening only to the exterior and of such size as to provide for the removal of the largest piece of equipment or the largest demountable portion thereof. Where equipment is excessively large, knockout wall panels shall be provided. The above areas shall also be located so that service trucks may be driven to the equipment room door.

**304.8.3—**Rooms and spaces containing the main electrical switchboard, main panel boards, or primary transformer shall be separated from the remainder of the building by walls having a minimum fire resistance rating of one hour and shall be located on an outside wall with an outside door so as to be readily accessible.

### **304.9—Records Room/Vault**

~~304.9.1—General:—All student records shall be maintained in a vault or records room that provides protection from fire, theft, vandalism, mold, and mildew.~~

~~304.9.2—Location:—Shall be in the administrative area, under the direct control of the administrative personnel and convenient to guidance counselors.~~

~~304.9.3—Construction:—Regardless of the storage medium or location, student records shall be stored in a space that provides a minimum 3-hour protection on all sides and the top. Doors shall be 3-hour rated with an automatic closing device.~~

~~304.9.4—Four-hour fire-rated cabinets on off-site storage of permanent records may be used when expressly directed by the district (provide letter).~~

#### ~~304.210~~ Stages and Platforms

~~304.210.1~~ Whenever a stage or platform is planned adjacent to or as a part of a cafeteria or gymnasium, the occupancy calculation ~~shall~~must be based on the floor area in addition to any fixed seating (e.g. bleachers) for both the calculation of egress requirements and, in middle and high schools, the calculations of readily available plumbing fixture requirements.

#### ~~304.11~~ Stairways (serving as exits)

~~304.11.1—Interior doors into or out of stairways shall be capable of being held in the open position at all times by means of smoke release devices. Recommend wall-mounted magnetic release type holdbacks. See DIVISION 12—ELECTRICAL for operational sequences.~~

~~304.11.2—There shall not be any storage facilities under stairs or stair landings, or in or opening to, the stairway itself, except as allowed by IBC.~~

~~304.11.3—The area beneath the stairs or landing(s) not used for circulation, shall be sealed off from bottom of stringer to floor.~~

~~304.11.4—For proper traffic flow, the minimum width of any stairway shall be 7' 4" for both elementary and secondary schools, measured from wall to wall if the enclosed type, or wall to outside of stringer if one side is open. The OSF will review special exceptions.~~

#### ~~304.12~~ Storage and Custodial Facilities

##### ~~304.12.1~~ Central Storage and Receiving

~~304.12.1.1—This space shall be located near an exterior loading/receiving area and be sized appropriately for school operational needs.~~

##### ~~304.12.2~~ Custodial (Janitor) Closets

~~304.12.2.1—At least one janitor's closet shall be provided per floor. More should be provided for large floors.~~

~~304.12.2.2—All custodial closets in unsprinklered buildings shall have 1-hour rated walls with ¾-hour doors.~~

~~304.12.2.3—The space shall be mechanically vented and secured.~~

~~304.12.2.4~~ Provide the custodial closet with a proper fire extinguisher within five feet of the outside edge of the entry door to the space.

~~304.12.3~~ Storage rooms (including custodial closets) greater than 100 square feet shall have 1-hour rated walls with ¾-hour doors.

### ~~304.13~~ Toilet Facilities

404.3.1 Individual toilets located in individual offices, workrooms or other areas with restricted access do not count toward the code required fixtures for the building.

404.3.2 Individual toilets located in instructional spaces may count toward the code required fixtures for the building if demonstrated that the fixtures are sufficient to serve the space and no public load is anticipated in the area.

404.3.2.1 Toilets must comply with IPC 403.2 for spaces serving students above the second grade.

404.3.2.2 At least 25% but not less than two toilet rooms for each type of space or grade served must comply with ANSI 117.1.

404.3.3 Individual toilets located in self-contained classrooms serving children with disabilities must comply with ANSI 117.1, IBC 1109.2.1.2 and IBC 1109.2.1.6.

~~304.13.1~~ At a minimum every individual building shall be provided with toilet facilities as hereafter stipulated in this section unless otherwise waived by the OSF.

~~304.13.2~~ Divide design load by one-half to ascertain male/female ratio.

404.3.4 Fixture counts for cafeterias, gymnasiums, auditorium and multipurpose spaces must be determined based on the intended use with the highest occupancy. Fixture counts for these areas that will not be used simultaneously may overlap with approval of the OSF.

404.3.5 Toilet facilities must be located near the area served, but in no case more than a 200 foot travel distance.

404.3.6 Toilet facilities and security measures must be located so that toilets are available whenever the space is occupied such as during afterschool programs and evening meetings.

404.3.7 Toilet facilities for outdoor activities must be provided. The facilities may be located in dedicated facilities such as a field house, in an adjacent building or with temporary facilities.

404.3.7.1 All required toilet facilities must be available for the duration of the activity.

404.3.7.2 At least 50% of the required fixtures and all required accessible fixtures must be located within a 200 foot travel distance.

404.3.7.3 The balance of the required fixtures must be located with no more than a 500 foot travel distance

404.3.7.4 If remote facilities are planned, directional signage to the additional facilities must be provided.

#### **404.4 Drinking Fountains/Water Coolers**

**404.4.1** Water coolers or an alternate source of free water is required in all cafeterias serving free or reduced meals.

**404.4.2** Gymnasium and auditorium lobbies must have a minimum of one fountain/cooler located in each area.

**404.4.3** Bi-level water coolers must be counted as one fixture for fixture count purposes.

#### **304.13.3 General Student Toilet Rooms (Group Type)**

**304.13.3.1** Toilet room doors and ceilings for reasons of security, doors may be omitted from student toilet rooms provided that all surrounding walls have a fire rating equal to that of the corridor. Sight lines into these spaces will need to provide privacy. Fully sprinklered buildings will not require rated walls. Lay-in ceilings are not recommended for toilet areas.

**304.13.3.2** Loading and fixture count shall be calculated in accordance with IPC, for classroom areas only.

**304.13.3.3** Consider allowance for future expansion or for possibility of addition of "relocatable" classrooms. Consult district.

**304.13.3.3** Do not include fixtures in individual teacher, administrative or guidance area or staff toilet rooms, or those in gymnasium dressing room areas not available to the general student population.

**304.13.3.4** The fixture count may include fixtures in toilet rooms designed mainly for the public (auditoriums, gymnasiums), but only if they are close to the mainstream of student traffic.

#### **304.13.4 Public Toilet Rooms (Group Type for Large Gatherings)**

**304.13.4.1** The design load for the number of persons to be served shall be calculated as follows:

**304.13.4.1.1** **Auditoriums:** Number of seats

**304.13.4.1.2** Gymnasiums with adjacent, connected stages or platforms, number of spectator seats, plus the seating capacity of the floor area not covered by bleachers (calculate floor occupancy using "chairs only" concentration)

**304.13.4.1.3** **Gymnasiums:** Number of spectator seats (not necessary to include possible chair seating on gym floor)

**304.13.4.1.4** Fixture count shall be calculated on the basis of the following table:

<b>Persons</b>	<b>Water Closets*</b>	<b>Lavatories</b>	<b>Urinals</b>
Male	1:360	1:240	1:180
Female	1:120	1:240	

~~\*TROUGH URINALS ARE NOT PERMITTED.~~

~~304.13.4.1.5~~ The fixture count may include standard student toilet fixtures if in a readily accessible and convenient location to the area being served and no more than 200 feet from the area to be served.

~~304.13.4.1.6 Fractions:~~ In calculating fixture counts, go to the next higher number for any fraction of a fixture.

~~304.13.4.1.7~~ Where a gym and auditorium are constructed in close proximity and toilet rooms will be readily accessible to both facilities at all times, the fixture requirements for the larger of the two will be deemed adequate.

#### ~~304.13.5 Gymnasium Dressing Room Toilets and Showers (secondary schools)~~

~~304.13.5.1~~ Each boys' and girls' PE and varsity athletic dressing room may have its own self-contained facilities, or in some cases a combined-use layout may be designed by means of doors (for security) that permit the combined facilities to be available to either or to varsity athletics. This should reduce the number of fixtures required and probably the square-foot area to some degree. If a combined-use facility is designed, the design shall be based on largest number anticipated at any one time.

~~304.13.5.2~~ The design load for the number of students to be served shall be calculated as follows:

~~304.13.5.3 PE:~~ Maximum number enrolled at any one period (each class may run as high as 40) divided by one-half to ascertain male/female ratio.

~~304.13.5.4 Varsity Athletics:~~ Maximum number expected to be served at any one time. Take into consideration any "overlapping" sports such as football and basketball. Determine male/female ratio by expected squad sizes.

~~304.13.5.5~~ Fixture count shall be calculated by using the next higher number for any fraction of a fixture.

~~304.13.5.6~~ Individual enclosures with curtains or doors shall be required for all showers

~~304.13.5.7~~ Fixture requirements shall be as follows:

#### **MANDATED FIXTURE RATIOS FOR PE/ATHLETICS TOILETS/SHOWERS**

<b>Persons</b>	<b>Water Closets*</b>	<b>Lavatories</b>	<b>Shower Heads <del>PE</del> — <del>Athletics</del></b>	
Males	1:40	1:40	1:12	1:12
Females	1:20	1:40	1:12	1:12

~~\*TROUGH URINALS SHALL NOT BE PERMITTED.~~

~~(Up to 67% of male facilities may be urinals.)~~

#### **304.13.6 Football Stadium Toilet Rooms**

**304.13.6.1**—The design load shall be the number of seats provided.

**304.13.6.2**—The fixture count shall be as follows:

Persons	Water Closet	Lavatories
Males	1:200	1:300
Females	1:100	1:300

—(Up to 67% of male facilities may be urinals.)

### **304.13.7 Other Toilet Facilities**

**304.13.7.1 Teachers' Toilets:** There shall be a minimum of two per floor. Floors with ten or fewer classrooms may use a single unisex toilet.

**304.13.7.2 Administration/Visitors' Toilets:** It is the district's option to provide a private toilet for principal, toilet for office administrative personnel, and/or toilet for visitors. These may be located so as to be combined into one, or larger teachers' toilets may be designed to serve for all, if conveniently located.

**304.13.7.3 Guidance:** Consult district

### **304.13.8 Drinking Fountains/Water Coolers**

**304.13.8.1**—At a minimum, drinking fountains/water coolers shall be provided on basis of 1:100 students for design enrollment.

**304.13.8.2**—In elementary schools where some classrooms contain drinking bubblers, each major corridor shall still have at least one fountain/cooler.

**304.13.8.3**—Cafeterias, "commons," gymnasium/dressing rooms, choral and music areas and vocational shops shall have a minimum of one fountain/cooler for each room or area.

**304.13.8.4**—Gymnasium and auditorium lobbies shall have a minimum of one fountain/cooler for each area. More coolers may be required and shall be provided in accordance with the code.

**304.13.8.5**—Bi-level water coolers shall be counted as one fixture for fixture count purposes.

## **SECTION 305 OTHER REQUIREMENTS**

### **305.1 Energy Efficiency**

**305.1.1**—As noted in Section 107.1.1 (p. 1-6), school buildings shall be designed in accordance with the energy code with reference to ASHRAE 90.1. Designers shall submit their required worksheets with the construction document submittal demonstrating compliance.

### **305.2 Finish Ceiling Heights**

#### **305.2.1 Minimum Ceiling Heights**

~~305.2.1.1—Except as otherwise noted herein, the following shall be minimum ceiling heights for all areas of new schools:~~

~~————Elementary: 8' 8", including corridors, Secondary: 9' 0", including corridors~~

~~305.2.1.2—Where designs are based on exposed decks and exposed structural members, consult the OSF about the possibility of slightly lower dimensions to the underside of structural members.~~

### ~~305.2.2—Exceptions to Minimum Ceiling Heights:~~

~~305.2.2.1—Renovation work to existing buildings, upon the review conditions and approval from the OSF.~~

~~305.2.2.2—Classrooms and other instructional areas, which are normally under constant supervision, may have minor areas of the ceiling furred to 8' 0" minimum for ductwork purposes. Gypsum wallboard or plaster shall be used in lieu of lay-in tile for such furring, particularly for the vertical surfaces.~~

~~305.2.2.3—Band/orchestra rooms in secondary schools shall have a minimum ceiling height of 14' 0" measured from the highest level in the area (if tiered).~~

~~305.2.2.4—Choral rooms in secondary schools shall have a minimum ceiling height of 12' 0" measured from the highest level in the area (if tiered).~~

~~305.2.2.5—Gymnasiums in all secondary schools shall have a minimum height of 22' 0" from the playing floor to underside of finish ceiling or to the bottom of structural members, whichever is lower. Acoustical ceiling tiles shall be securely clipped to the grid.~~

~~305.2.2.6—Vocational shops shall have a minimum ceiling height of 12' 8" to finish ceiling or underside of exposed structure, whichever is lower. Exceptions may be made, depending on the program involved; consult the OSF.~~

~~305.2.2.7—Cafeterias, media centers, auditoriums, multipurpose rooms, and other larger areas shall have ceiling heights as determined by the architect to meet acoustic and aesthetic requirements.~~

~~305.2.2.8—Administrative offices, storage rooms, teachers' lounges, and other areas not frequented by students may have lower ceilings at the architect's discretion.~~

### ~~305.3—Doors~~

~~305.3.1—General: Except as otherwise noted herein, the content of this section refers to hinged swinging doors.~~

~~305.3.1.1—Fire doors, including doors at stairwells, horizontal exit doors (usually corridor-to-corridor situations), and any corridor smoke doors shall be capable of being held open by devices which release upon detection of smoke.~~

~~305.3.1.2—Each student's PE and athletic dressing rooms shall have at least two means of egress. The passage into the gymnasium itself may be considered to be the second egress.~~

~~305.3.1.3—Closers are not required on classroom doors.~~

### **305.3.2—Door Widths**

**305.3.2.1**—All exterior and interior doors shall be a minimum of 3' 0" wide, unless otherwise stated in this regulation. Interior stairwell doors should be as wide as possible.

### **305.3.3—Door Swings**

**305.3.3.1**—Doors shall swing in the direction of exit travel where required by the IBC (this includes, but is not limited to, exit doors to the exterior, and exit doors into or out of stairs and through horizontal exits, from hazardous areas, from areas occupied by more than 50 persons or areas where travel distance within the area exceeds 75 feet). Also, all doors from media centers, gymnasium dressing rooms, industrial art, prevocational or T&I shops, and from boiler, furnace, mechanical, or electrical equipment rooms shall swing in the direction of exit travel.

**305.3.3.2**—Except for the requirements in Section 305.3.3.1, all other doors may swing into or out of the areas they serve, including classrooms.

**305.3.3.3**—In multiple openings, two doors should not be hung back to back on the same mullion, although a single mullion is usually acceptable as the only separation between the hinge side of one door and the strike side of another. Allow reasonable separation between doors to allow for backswings.

**305.3.3.4**—Where a floor-mounted closer is used with a built-in stop in the closer itself and a coordinated stop at the top, surface-applied floor or wall stops are not deemed necessary if a 95° door swing or preferably 105° swing, is specified.

**305.3.3.5**—Where overhead closers are used with exterior doors, surface-applied floor stops or equivalent shall be specified.

### **305.3.4—Door Panic Devices**

#### **305.3.4.1—Exterior Locations**

**305.3.4.1.1**—"Touch-bar" type exit devices shall be installed on all exterior doors requiring panic hardware (this type pushes in rather than down and is considered to be more secure against unauthorized entry and more maintenance-free). It shall be of a design that does not facilitate the use of a chain and padlock.

**305.3.4.1.2**—All exposed surfaces shall be nonferrous metals or stainless steel.

#### **305.3.4.1.3—Interior Locations**

**305.3.4.1.5**—"Touch-bar" type exit devices are also required for interior doors where panic hardware is required, provided fire label requirements can be met; exposed surfaces shall be the same materials as for exterior door devices above.

### **305.3.5—Lock and Latch Sets**

~~305.3.5.1—All doors, unless otherwise specifically exempted by the OSF, shall be equipped with hardware that is operable at all times from the egress side by a single operation (i.e., use of keys, thumb turn bolts, and the like, shall be prohibited).~~

~~305.3.5.2—Individual student toilet rooms (such as in kindergartens and elementary classrooms) with privacy locks which shall release upon turn of knob from inside and also shall be equipped with emergency release feature on outside.~~

~~305.3.5.3—Where double doors open to fire-rated corridors from mechanical, electrical, or storage rooms, or other unoccupied areas; head and foot bolts may be used on the inactive door without a closer.~~

### ~~305.3.6—Closers~~

#### ~~305.3.6.1—Closers for Fire Doors~~

~~305.3.6.1.1—All fire doors shall be self-closing unless otherwise an exception is allowed by code or state regulation.~~

~~305.3.6.1.2—Fire doors in areas subject to high-use traffic during the school day, including stairwells, horizontal exit doors (usually corridor-to-corridor situations), and any corridor smoke doors, shall be capable of being held open by magnetic devices which release upon detection of smoke. Ceiling-mounted smoke detectors in combination with wall-mounted magnetic releases should be specified rather than the combination closer/detector at the head of the door because of vandalism factors (particularly in all secondary schools).~~

~~305.3.7—Roll-down or Folding Doors or Grilles: These shall not be allowed where their use negates required exit ways or exit access corridors, or where dead-end corridor violations result. This prohibition shall be in effect, regardless of whether or not the district intends to close such doors or grilles only after school hours.~~

~~305.3.7.1—Roll-down doors/shutters used for the transfer of items, as is typically seen in concessions areas must be equipped with smoke-actuated closers when the door/shutter serves as the opening protective in a rated wall. Each door shall be equipped with a safety edge that will allow door to reverse when it hits an obstruction within its downward path.~~

### ~~305.4—Windows~~

~~305.4.1—General: See DIVISION 11—MECHANICAL for ventilation requirements where air conditioning, mechanical, or natural ventilation is utilized.~~

#### ~~305.4.2—Required Windows~~

~~305.4.2.1—Each classroom or other instructional area adjoining an exterior wall shall have a minimum of one window unless otherwise waived by the OSF.~~

~~305.4.2.2—Where classrooms or instructional areas have a door directly to the outside, the minimum of one window shall still be required.~~

#### ~~305.4.3—Windows for Emergency Egress~~

~~305.4.3.1—Except as noted there shall be at least one window that qualifies for emergency egress in any space where windows are required, including those on all floors of multistory~~

buildings. However, if there is an egress door directly to the outside, the required window need not qualify as an emergency egress.

~~305.4.3.2~~ If there is more than one window in an area, all do not have to qualify for emergency egress, but those that do shall have a plainly visible plastic or metal placard stating “emergency exit”; the placard shall be riveted or attached to the window with non-removable screws. If all windows qualify for egress, placards are not required.

~~305.4.3.3~~ The following window types are permitted for egress: Single hung sash, double hung sash, casement, or projected.

~~305.4.3.4~~ Projected awning windows shall only be used where the escape portion opens to at least 45° and the size of the opening is as stipulated in Section 305.4.3.6.2. Sliding windows are not acceptable because of dirt collecting in tracks.

~~305.4.3.5~~ Size of egress openings:

~~305.4.3.5.1~~ For a single, double hung, or casement window, there shall be a minimum of a 5.7 square feet opening in the clear, with a minimum clear dimension of 24" for the height and 20" for the width.

~~305.4.3.5.2~~ If projected windows are used, they shall have a minimum clear sash opening of 24" for the height and 20" for the width not less than 5.7 square feet clear passage under the sash when the sash is at a 45° open position.

~~305.4.3.6~~ Heights from floor to bottom of egress opening.

Location	Elementary	Secondary
First Floor: Minimum	4"	4"
First Floor: Maximum	3'-0"	3'-0"
Second Floor and above:	2'-6"	2'-6"
Minimum	3'-0"	3'-0"
Second Floor and above:		
Maximum		

~~305.4.3.6.1~~ Note that the heights in this table are to be measured from the floor to the actual opening and the thickness of the frames must be included. A tolerance of two inches will be allowed on maximum heights.

~~305.4.3.7~~ **Locking:** Egress openings shall have a one point locking release, preferably within reach of the age of the student served, but in no case higher than 5'-8".

~~305.4.3.8~~ A force no greater than 15 pounds shall be allowed to open the lower sash of an emergency window.

#### ~~305.4.4~~ **Windows (or Doors) Opening to Interior Courts**

~~305.4.4.1~~ Where required first floor emergency egress windows or egress doors open to interior courts, the court shall have access to a protected passageway which leads to the open area outside the building, except as noted in Section 305.4.4.2.

~~305.4.4.2~~ — In the case of rooms above the first floor level, the classrooms or other instructional areas bordering a court shall be considered the same as if they were “interior” classrooms and shall meet the requirements of Section 303.2.2 of this regulation.

~~305.4.5~~ — **Window Screens**

~~305.4.5.1~~ — Window screens shall be required for any operable windows in cafeterias, kitchens, or in toilet rooms (although windows are not recommended in the latter). “Screened windows” shall not be used at emergency egress windows.

Draft 5/17/12

## DIVISION 4

### BARRIER-FREE DESIGN

#### SECTION 401 INDEX OF SECTIONS

Section Number and Title	Page
402 General	4-1
403 Special Consideration	4-1

#### SECTION 402 GENERAL

**402.1** Barrier-free design is regulated by the South Carolina Building Code Council. The document *Rules and Regulations for Making Building and Facilities Accessible to and Usable by Physically Handicapped People* is available to design professionals and other interested persons or groups free of charge from the S.C. Building Code Council.

**402.2** Schools shall adhere to the American National Standards Institute, Incorporated (ANSI) Standard A117.1 and the requirements for the physically disabled as set forth in IBC.

~~**402.3** Design professionals are reminded that design criteria in Title II of the Americans with Disabilities Act (ADA) and the ADA Accessibility Guidelines (ADAAG) for buildings and facilities may be more stringent.~~

#### SECTION 403 SPECIAL CONSIDERATIONS

**403.1 PE and Athletic Facilities:** Shall be provided with accessible facilities per ICC/ANSI A117.1 including toilet, sink, and shower areas.

**403.2 Stage Areas:** Shall be accessible to people with physical disabilities.

**403.3 Science Laboratories:** Shall have a minimum of at least one workspace meeting the accessibility requirements of ICC/ANSI A117.1. Equipment and features may be portable but must be comparable to those available in other student workspaces.

**403.4 Art Rooms:** Shall have a minimum of at least one workspace meeting the accessibility requirement of ICC/ANSI A117.1. Equipment and features may be portable but must be comparable to those available in other student workspaces.

**403.5 Home Economics Areas:** For the food preparation curriculum, one unit kitchen shall be accessible in accordance with ICC ANSI A117.1. One worktop containing a sink and range top shall be accessible in accordance with ICC ANSI A117.1. A wall oven shall be provided adjacent to the worktop that is accessible in accordance with ICC ANSI A117.1 with bottom of the oven door at 32" above floor.

## **DIVISION 5**

### **EMERGENCY PREPAREDNESS**

#### **SECTION 501 — INDEX OF SECTIONS**

<b>Section Number and Title</b>	<b>Page</b>
<b>502 — General</b>	<b>5-1</b>
<b>503 — Designing and Retrofitting Buildings to Resist Natural Hazards</b>	<b>5-1</b>
<b>504 — Reference Agencies and Standards</b>	<b>5-2</b>

#### **SECTION 502 GENERAL**

**502.1** — This division deals with all phases of emergency preparedness as related to disasters and emergencies, both natural and man-made.

**502.2** — The South Carolina “Emergency Operations Plan” coordinates emergency response with all state agencies and public-owned facilities. The authority for this plan was granted in Act No. 199, July 30, 1979, Acts and Joint Resolutions of the General Assembly of the State of South Carolina. The Emergency Management Division, Office of the Adjutant General, is charged with implementing this plan. In the plans, the Department of Education is charged with coordinating the use of U.S. Department of Agriculture food stocks within school lunch programs and assisting in facilitating the utilization of school facilities for shelter and feeding.

**502.3** — Districts and their architects and engineers are reminded the IBC requires that all components and systems be designed and constructed to minimum design loads and to resist wind load, flood and seismic forces. These components include, but are not limited to, the structure; exterior and interior walls; ceilings; elevators; mechanical, plumbing and electrical equipment; and ducts and pipes over a certain size.

**502.4** — Districts and their architects and engineers are also reminded that the ADA requires an “area of rescue assistance” in all multistory buildings. This is a fire-protected area where people with physical disabilities can await rescue and communicate their presence by alarm or intercom.

**502.5** — Provided the school meets the minimum requirements to be a Red Cross Shelter, the school shall be designed with a connection post and a manual transfer switch to connect to an emergency generator (delivered by an offsite party). A simple 4-post connection is all that is required. A switch must be labeled as an emergency connection. Critical loads to be powered must be determined in consultation with the school district and the local emergency preparedness agency personnel.

#### **SECTION 503 — DESIGNING AND RETROFITTING BUILDINGS TO RESIST NATURAL HAZARDS**

**503.1** — Seismic design shall be mandatory in accordance with the building code. Seismic considerations shall be taken into account in the early design stages, making it possible to choose a type of construction that resists seismic forces with minimum additional cost.

**503.2** — Every building shall be of sufficient strength to support the wind and seismic generated loads and forces encountered or combinations thereof, without exceeding the stresses prescribed in the building code.

Every building shall be so located and designed as to prevent flooding under the normal range of weather conditions found in the several regions in South Carolina.

~~503.4~~ Extensive renovation projects valued in excess of 50 percent of a school's insured value are expected to add significantly to school building life expectancy and shall include a seismic/wind load evaluation of the building, improvement recommendations and costs for school district consideration.

#### ~~SECTION 504-REFERENCE AGENCIES AND STANDARDS~~

~~504.1~~ Seismic design shall be in accordance with Building Code. The following publications will be helpful in the design, construction and/or renovation of public school buildings:

~~ASCE-SC Standard 1-96, 1996, Standards for Practice of Earthquake Engineering of Buildings in South Carolina and the Eastern United States.~~

~~HQ AFCEA Engineering Technical Letter (ETL) 00-5, Seismic Design for Buildings and Other Structures, June 2000, Headquarters, Air Force Civil Engineering Support Agency.~~

~~FEMA-156/December 1994, Second Edition, Typical Costs for Seismic Rehabilitation of Existing Buildings, Summary, Federal Emergency Management Agency.~~

~~FEMA-157/September 1995, Second Edition, Typical Costs for Seismic Rehabilitation of Existing Buildings, Support Documentation, Federal Emergency Management Agency.~~

~~FEMA-178/June 1992, NEHRP Handbook for the Seismic Evaluation of Existing Buildings, Federal Emergency Management Agency.~~

~~FEMA-273/October 1997, NEHRP Guidelines for the Seismic Rehabilitation of Buildings, Federal Emergency Management Agency.~~

~~FEMA-274/October 1997, NEHRP Commentary on the Guidelines for the Seismic Rehabilitation of Buildings, Federal Emergency Management Agency.~~

~~ICC-500-2008 Standard for the Design and Construction of Shelters.~~

## **~~DIVISION 6~~**

### **~~SCHEMATIC AND DESIGN DEVELOPMENT PHASE~~**

#### **~~SECTION 601 INDEX OF SECTIONS~~**

<del>Section Number and Title</del>	<del>Page</del>	<del>Section Number and Title</del>	<del>Page</del>
<del>602 Required Construction</del>	<del>6-1</del>	<del>605 Design Development</del>	<del>6-6</del>
<del>Submittal 6-3</del>			
<del>Permits and Approvals</del>	<del>6-1</del>	<del>606 Additions to Existing Building</del>	<del>6-6</del>
<del>603 Flood Plain Development</del>	<del>6-2</del>	<del>607 Plan Review Procedure</del>	<del>6-6</del>
<del>604 Schematic Plan Submittal</del>	<del>6-3</del>		

#### **~~SECTION 602 REQUIRED CONSTRUCTION PERMITS AND APPROVALS~~**

##### **~~SCHEDULE OF REQUIRED CONSTRUCTION PERMITS/APPROVALS~~**

**~~—Type of Development S.C. Code of Laws Where to Obtain  
—and Regulation Permit/Approval~~**

<del>Air pollutant discharge</del>	<del>Section 48-1-100 R.61-62.1</del>	<del>DHEC, Air Quality Control</del>
<del>Asbestos abatement</del>	<del>R.61-62.1</del>	<del>DHEC, Air Quality Control</del>
<del>Construction in critical coastal areas</del>	<del>Section 48-39-10-130-190</del>	<del>DHEC, Ocean and Coastal Res. Management</del>
<del>Educational facilities K-12</del>	<del>Section 59-23-40</del>	<del>SDE, Office of School Facilities</del>
<del>ETV</del>		<del>SDE, Office of School Facilities</del>
<del>Fire suppression system</del>	<del>R. 19-300.7</del>	<del>State Fire Marshal</del>
<del>Floodplains, construction in</del>	<del>Exec. Order 82-19</del>	<del>Local Authority</del>
<del>Food service, cafeterias</del>	<del>R. 61-25</del>	<del>DHEC, County Health Dept.</del>
<del>Hazardous waste management, storage and disposal</del>	<del>Section 44-56-20,60; R. 61-79</del>	<del>DHEC, Solid and Hazardous Waste</del>
<del>Landfills, solid waste disposal</del>	<del>R. 61-70; 107.6</del>	<del>DHEC, Solid and Hazardous Waste</del>
<del>Road encroachment, local</del>	<del>Section 57-7-60</del>	<del>Local County Authority</del>
<del>Road encroachment, state</del>	<del>Section 57-5-1080</del>	<del>DOT, Traffic Engineering</del>
<del>Sanitary sewer, treatment and disposal</del>	<del>R. 61-56 and -61-57</del>	<del>DHEC, Domestic Wastewater</del>

Septic-tank system	R. 61-56	DHEC, Wastewater Management, Division of Environmental Health
Storm-water discharge, erosion Sediment control	R. 61-9, R. 72-100 through 72-108	DHEC, Water Pollution Control State Engineer; Local Authority
Underground storage tanks	R. 61-92	DHEC, Groundwater Protection
Vocational facilities	Section 40-13-20 through 40-13-50	DLLR, Board of Cosmetology
Waste-discharge (sewage-industrial waste, etc.)	Section 48-100, 110; R. 61-9	DHEC, Water pollution Control
Water-supply	Section 44-55-40; R. 61-57 and 61-58	DHEC, Water Supply Construct
Wells, underground injection	R. 61-71 and 61-87	DHEC, Groundwater Protection
Zoning	Sections 6-7-830 and 6-9-110	Local Authority

### **SECTION 603 — FLOOD PLAIN DEVELOPMENT**

**603.1** — The “State of South Carolina Building Standards in Flood Plain Areas” requires compliance with the criteria set forth in Sections 60.3 and 60.5 of Title 44, Code of Federal Regulations (available from the State Coordinator’s Office for the National Flood Insurance Program (NFIP)). Flood hazard areas are those identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary maps (FHBM) that are subject to inundation by a 100-year flood. All plans for new construction, substantial improvement and other development in a flood hazard area (floodplain) shall be submitted to the responsible local authority to obtain a permit to develop in a flood hazard area. Flood hazard areas are those identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary maps (FHBM) that are subject to inundation by a 100-year flood. A permit shall be obtained and the OSF shall be provided with a permit copy prior to advertising a project for bids.

### **SECTION 604 — SCHEMATIC PLAN SUBMITTAL (optional)**

**604.1** — Schematic plan submittal is for new facilities, major additions and major renovations. Schematic plans submitted shall be single copy and consist of the following:

#### **604.1.1 — Site Plan**

~~604.1.1.1—Should show entire site plan with building layout, drives, parking areas, walks, environmental learning areas, playing fields, and other such basic data.~~

~~604.1.1.2—Topographical information is optional with the design professional.~~

#### ~~604.1.2—Floor Plan(s)~~

~~604.1.2.1—Should be at appropriate scale (1/16" preferably), drafted accurately, indicating doors and windows.~~

~~604.1.2.2—Should indicate names of areas and show in small rectangular block the square footage of each main area. Show grade classification for elementary classrooms.~~

~~When using the schematic plan submittal, submission of a building code analysis (Form F3) is required at this stage.~~

~~604.1.2.4—For additional required plan information see Sections 605.1.6.1.5, 605.1.6.1.6, and 605.1.6.7.~~

~~Form F6: Preliminary Information Form shall be submitted.~~

### ~~SECTION 605—DESIGN DEVELOPMENT SUBMITTAL (required)~~

~~605.1—The design development submittal shall be a single copy and shall consist of the following:~~

#### ~~605.1.1—Site Plan~~

~~605.1.1.1—Include a small location map that relates the site to the surrounding locale.~~

~~605.1.1.2—Show the entire site plan at suitable scale. Indicate all topographic information with existing and proposed finished grades, boundary lines, wooded areas, orientation, site acreage, existing utilities, including fire hydrants, and other pertinent data.~~

~~605.1.1.3—Indicate the drives, parking areas, walks, playing fields, highways, etc.~~

~~605.1.1.4—Indicate the building location, floor grade level, areas of future anticipated expansion, etc.~~

~~605.1.1.5—Indicate the source of water, gas, electric, or sewage facilities.~~

~~605.1.1.6—In cases of additions to existing buildings, or new buildings added to an existing school complex, all of the above information should be shown, including the entire site plan and indication of all existing buildings with floor grade elevations shown. However, total topographic information will not be required and may be limited at the design professional's discretion to the general area of the site where new construction or other changes occur.~~

#### ~~605.1.2—Floor Plans~~

~~605.1.2.1—The building code analysis (Form F3) shall be incorporated into the drawings.~~

~~605.1.2.2—At appropriate scale (1/8" preferably). If entire plan cannot be shown on one sheet, prepare smaller scale (1/16" preferably) overall plan along with larger scale partial plans to form the whole.~~

~~605.1.2.3—Indicate names of areas and show in small rectangular block the square footage of each main area. Show grade classification for elementary classrooms.~~

~~605.1.2.4~~ Indicate windows, doors, and door swings

~~605.1.2.5~~ Indicate on floor plans all built-in cabinet work, sinks, chalkboards, tackboards, lockers, and other like features. Where classrooms are repetitious, chalkboard and tackboard may be indicated as typical in just one space.

### ~~605.1.3~~ Exterior Elevation Drawings

~~605.1.3.1~~ Show all sides at a convenient and readable scale.

### ~~605.1.4~~ Equipment and/or Furnishing Layouts

~~605.1.4.1~~ Indicate on not less than 1/8" floor plans (unless otherwise waived by the OSF), equipment and furnishing layouts. Identify various items by name and give other pertinent data. Include areas as follows:

~~art rooms~~ media center  
~~auditorium seating~~ computer labs  
~~gym seating and dressing rooms~~ science labs  
~~any and all vocational training facilities~~ home economics rooms

~~Exception:~~ With the exception of the media center layout, portable equipment or furnishings that are not directly related to utility requirements need not be indicated.

~~605.1.4.2~~ Indicate on a separate 1/4" scale drawing equipment layout for kitchen areas, including kitchens in connection with vocational curricula. Include an itemized legend of equipment with all layouts.

### ~~605.1.5~~ Cross Section Drawings

~~605.1.5.1~~ Diagrammatic type drawings are sufficient without undue detail. Indicate ceiling heights, roof slope, general structure, etc.

~~605.1.5.2~~ At appropriate scale (1/8" or 3/16" preferably)

~~605.1.5.3~~ Cross sections shall be included so that all major elements of the building are shown.

~~605.1.5.4~~ Structural conditions at firewall(s)

### ~~605.1.6~~ Building Code Analysis

~~605.1.6.1~~ Building code compliance is the responsibility of the design professional(s) representing the district and an outline code analysis, Form F3, shall be incorporated into the drawings for review. Submitted data shall set forth all pertinent code requirements, including the following:


~~605.1.6.1.1~~ The date of the building code and amendments thereto, in effect at the time of the initial submittal (design development or schematic), shall establish code requirements for the remainder of the project, including the construction phase.


~~605.1.6.1.2~~ Construction classification (Example: Type II-B, etc.)


~~605.1.6.1.3~~ Occupancy classification of the various parts (example: Educational, Assembly, etc.)

**605.1.6.1.4** Where area limitations occur due to construction classification, indicate firewall separation on drawings and submit area calculations (either on the drawing or on separate form). Design professionals are cautioned to review code requirements, including roof structure requirements at firewall(s).

**605.1.6.1.5** Indicate on all plans all firewalls, fire-rated walls and/or smoke partitions by color coding and/or a readable legend as follows:

— Fire walls/Fire Area Walls — = — red — 

— 2 hour wall — = — green — 

— 1 hour wall — = — yellow — 

— (Similar symbols to the above are acceptable if properly noted in a legend.)

Indicate on all plans all fire-rated doors by putting figures at applicable door openings as follows:

3 = — 3 hour

1 ½ = — 1 ½ hour

1 = — 1 hour

¾ = — ¾ hour

20 = — 20 minute

**605.1.6.1.7** Indicate on all floor plans the individual room occupancy number and floor occupancy totals, travel distances, and egress widths.

**605.1.6.1.8** Resistance ratings shall be based on specific assemblies that have successfully performed under tests made by an approved laboratory (such as U.L., Factory Mutual, Warnock Hersey, etc.), except that if the design professional's designs require materials or construction other than that shown in a specific assembly, reference is made to the building code, subsection entitled "Alternate Materials and Alternate Methods of Construction." Under this option the burden of proof of the fire rating rests with the design professional. Alternate methods proposed shall be so indicated at or before the design development stage and concurrence of the OSF obtained before proceeding.

**605.1.6.1.9** In the case of an addition to an existing building, firewall separation shall normally be provided between the new and existing construction unless the design professional can validate that this would not be required by the building code.

**605.1.6.1.10** — Show assumed property lines for multiple buildings on the same lot.

**Form F6:** Preliminary Information Form, shall be submitted.

### **605.1.8 — Fire Protection System**

**605.1.8.1** — All fire protection systems shall be in accordance with the requirements of the building code, fire prevention code, and appropriate NFPA standards.

**605.1.8.2** — Types of portable fire extinguishers and their distribution are dependent upon the "class of fire." Refer to *NFPA 10: Standard for Portable Fire Extinguishers* (latest edition) as follows:

Chapter 1: Fire Classes A, B, C, and D  
Chapter 2: Selection of Extinguishers  
Chapter 3: Distribution of Extinguishers

## **~~SECTION 606—ADDITIONS TO EXISTING BUILDINGS~~**

### **~~606.1—Plans of Existing Buildings~~**

**~~606.1.1~~**—If the design professional has access to original tracings or has extra prints, he should include with his submittal one print of site plan, floor plans, elevations, and sufficient sectional information to show general construction. Also, indicate on existing plans where additions are to be added.

**~~606.1.2~~**—If the above data is not available and the OSF does not have microfilm records on file, the design professional should furnish enough schematic plan drawings of the existing building to facilitate a code analysis of the overall complex.

**~~606.2~~**—**~~Plumbing Fixtures:~~** A detailed count of all student toilet fixtures in the existing building shall be furnished with plan submittal to the OSF.

**~~Construction Safety Plan for Joint Occupancy:~~** The design professional in conjunction with school district staff and, if applicable, the construction/program manager shall develop a written and/or graphic plan to maintain the safety, separation and egress requirements of students, staff, and visitors while construction activities are in progress. The plan shall address exit access, exit width, travel distance, building separation, site traffic circulation, etc.; as code would require for the occupied portion of the project. This plan shall be submitted no later than the design development phase. This approved plan shall be made part of the construction documents.

## **~~SECTION 607—PLAN REVIEW PROCEDURE~~**

**~~607.1~~**—The OSF will review for compliance with applicable building codes and regulatory or statutory requirements. Review of building code and regulatory or statutory requirements by the OSF shall not relieve the design professional representing the district from code omissions as interpreted by the OSF.

**~~607.2~~**—Plan reviews may be done on a personal basis with the design professional, on request. In most cases, it will be possible to accomplish the review by telephone. Should a meeting be necessary for a plan review, school district representatives shall be invited to attend such meetings.

**~~607.3~~**—After each review, a decision will be made as to the necessity of further resubmittal of corrected plans. This will depend on the complexity of the job and the changes required.

**~~607.4~~**—After completing the review of design development drawings, verbal authorization will be given by the OSF to the design professional to proceed into the construction documents phase. The design professional assumes responsibility for all corrections required by the OSF if he proceeds without such authorization.

## **DIVISION 7**

### **CONSTRUCTION DOCUMENTS PHASE**

#### **SECTION 701—INDEX OF SECTIONS**

<b>Section Number and Title</b>	<b>Page</b>
<b>702—General</b>	<b>7-1</b>
<b>703—Construction Documents Review Procedure</b>	<b>7-2</b>

#### **SECTION 702—GENERAL**

**702.1—Completed Documents Required:** Incomplete plans and/or specifications shall not be submitted to nor accepted by the OSF.

**702.2—Seals:** In accordance with state regulations, (Department of Labor, Licensing and Regulation) each print of the final drawings and the title page of each set of specifications shall be identified with the design professional's seal. In addition, the seals of any landscape architect and structural, plumbing, mechanical, and electrical engineer shall be placed on the prints encompassing their work.

#### **702.3—Energy Conservation**

**702.3.1**—The entire design, including architectural, mechanical, and electrical portions, shall be designed in accordance with the International Energy Conservation Code (IECC) and any other relevant standards referenced therein. Compliance with ASHRAE 90.1 shall be required in the design of all new and renovated facilities. Submit appropriate work sheets to demonstrate compliance. Energy management systems may be specified to be consistent with existing systems where applicable and shall comply with all other requirements of this regulation.

#### **702.4—Fire Protection Systems**

**702.4.1**—All fire protection systems shall be in accordance with the requirements of the building code, the fire code, and relevant NFPA standards.

**702.4.2**—Included in this general heading are building sprinkler systems, protection for kitchen hoods, paint spray booth, computer installations, and portable fire extinguishers.

#### **702.5—Finishes**

**702.5.1** The design professional shall select finishes that meet or exceed the following minimum surface reflectances (all foot-candle lighting requirements are based on these criteria).

_____ Ceiling cavity*	80 percent
_____ Walls	50 percent
_____ Floor cavity*	20 percent

\*ELECTRICAL ENGINEERS COMMONLY DEFINE "CEILING CAVITY" AS ANY FINISH AREA ABOVE THE BOTTOM SURFACE OF THE LIGHT FIXTURES, AND "FLOOR CAVITY" AS THE AREA BELOW DESKTOP LEVEL (30" ASSUMED).

## **702.6—Building Code Analysis**

**702.6.1**—Refer to Division 6, Item 605.1.6, “Building Code Analysis.” Note that if there have been code related changes since design development, drawings, and calculations, Form F3 must be resubmitted revised and incorporated into the drawings.

**702.6.2**—Life safety code information required on the plan sheets by Sections 605.1.6.1.5, 605.1.6.1.6, and 605.1.6.1.7 shall be replicated on construction documents.

**702.7—Glazing Requirements:** Compliance with the latest state and federal regulations, as well as the building code, shall be required.

## **702.8—Mounting of Exit/Directional Signs**

**702.8.1**—All exit signs and directional signs related thereto should be wall mounted (whether on surface or recessed) wherever possible, as ceiling mounted signs are especially vulnerable to vandalism in schools. The design professional should take this into consideration in his design and avoid glass areas over doors or glass wall areas where such signs would usually be located.

## **702.9—Occupant Capacity Posting**

**702.9.1**—A permanent sign stating the maximum occupant content based on the capacity of the exits shall be conspicuously posted in all gymnasiums, auditoriums, cafeterias, theaters, or other like places of assembly within a school. Each sign shall read, “Occupancy by more than \_\_\_\_\_ persons is dangerous and unlawful, by order of the Building Official” with the appropriate occupant number filled in.

**702.9.2**—Such signs shall be of metal or plastic, installed with non-removable fasteners, and shall have lettering a minimum of 1" high. Signs shall be installed at a readily visible location.

## **SECTION 703—CONSTRUCTION DOCUMENTS REVIEW PROCEDURE**

### **703.1—Review by the OSF**

**703.1.1**—Final construction documents (one set) shall be submitted to the OSF along with information as required by the OSF. The architect shall not submit incomplete plans, incomplete specifications or incomplete project manuals.

**703.1.2**—After review by the OSF, a meeting may be scheduled at the request of the design professional to review the project. Otherwise, comments will be relayed by telephone. Should a meeting be necessary for a plan review, school district representatives shall be invited to attend such meetings.

**703.1.3**—After review with the design professional, the OSF shall render “approval” or “conditional approval,” or may withhold approval of project.

**703.1.3.1**—“Approval” signifies there are no corrections necessary and the project may be advertised.

**703.1.3.2**—“Conditional approval” signifies there are relatively minor corrections to be made and the project may be advertised provided the design professional gives his assurance that corrections will be made promptly and that the corrected documents will be available to bidders the day after advertisement first appears. Corrected documents should simultaneously be delivered or mailed back to the OSF.

**703.1.3.3**—Withholding of approval signifies that the project shall be returned to the OSF after corrections are made for a re-review before advertising.

**703.1.4**—Reference the resubmittal of corrected documents, the OSF shall decide whether the design professional shall return a complete set of new documents or just sheets on which changes have been made. All changes shall be circled with red pencil or pen, including any changes made between the time of initially submitting review documents and the review date itself. Failure to do so may delay the review process.

**703.1.5**—Upon approval of the contract documents, the design professional shall furnish the OSF with electronic (CAD and/or word processor) copies of the contract documents for archival purposes.

**703.1.6**—Review of building code and regulatory or statutory requirements by the OSF shall not relieve the design professional, as representative of the district, from the ultimate responsibility in regard to all such requirements.

**703.1.7**—The design professional, construction project manager or the district shall not advertise for bidding a project before the OSF has reviewed the contract documents and issued a verbal or written approval.

#### **703.2—Review by Other Agencies**

**703.2.1**—Construction documents shall also be submitted to the following agencies for review in addition to the OSF, unless otherwise waived.

**703.2.1.1**—S.C. Department of Transportation, Traffic Engineering

**703.2.1.2**—S.C. Department of Health and Environmental Control, Division of Storm Water Management

**703.2.1.3**—S.C. Department of Health and Environmental Control, Bureau of Environmental Health, Food Protection Branch

**703.2.1.4**—ETV Staff Engineer

**703.2.2**—These submittals shall be sent directly to each agency by the design professionals (with notification of transmittal to the OSF). The design professionals shall also be responsible for obtaining all necessary approvals from these agencies and for transmitting copies of same to the OSF.

**703.2.3**—If advertising is delayed longer than six months after initial approval of construction documents by the OSF the design professional shall request in writing a new permission to advertise with a statement as to whether there have been any changes in the contract documents since the original approval. If there have been changes, a resubmittal of contract documents shall be required.

## **DIVISION 8**

### **BIDDING AND AWARD PHASE**

#### **SECTION 801 — INDEX OF SECTIONS**

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<b>802 — Bidding Procedures</b>	<b>8-1</b>
<b>803 — Required Transmittals</b>	<b>8-1</b>

#### **SECTION 802 — BIDDING PROCEDURES**

**802.1 — General** Procurement is the jurisdiction of each school district as set forth in the District's Procurement Policy and/or the S.C. Procurement Code. The Office of the State Engineer should be considered as a resource and districts are advised to seek legal counsel or an agent versed in the procurement prior to advertizing for bids and services.

#### **SECTION 803 — REQUIRED TRANSMITTALS**

**803.1** — The following administrative records of the Bidding Phase shall be sent to the OSF:

**803.1.1** — Addenda (with a code impact statement from the design professionals)

**803.1.2** — Revised drawings (with a code impact statement from the design professionals)

**803.1.3** — Any approvals from other state agencies not previously submitted

## **DIVISION 9**

### **CONSTRUCTION PHASE**

#### **SECTION 901—INDEX OF SECTIONS**

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<b>905—Requirements During Construction</b>	<b>9-1</b>	<b>909—Record Drawings</b>	<b>9-4</b>

#### **SECTION 902 CHANGES/CHANGE ORDERS**

**902.1**—Any change, addition, or modification to plans previously approved by the OSF, which affect adherence to codes, regulations, and/or statutes shall be submitted to the OSF and the agency which has jurisdiction (DHEC, DOT, etc.) prior to execution of the change order or change directive. Changes will not be considered by the OSF without the approval of the architects and engineers whose stamps appear on the drawings. All submitted change orders shall have a code impact statement from the architect and/or engineer.

#### **SECTION 903—INSPECTION REQUIRED BY CODE**

**903.1**—Except for inspections required herein and provided by the OSF, it will be the responsibility of the owner to contract for all code required inspection services. Inspections shall only be carried out by individuals specifically registered by LLR, the Building Codes Council, to perform IBC Chapter 1 and/or Chapter 17 inspections. IBC Chapter 1 inspectors shall also be formally approved by OSF and must have on file with OSF a fully executed “Memorandum of Understanding” defining and agreeing to their responsibilities. The OSF approved inspectors shall be responsible for approved construction document compliance. They shall advise the owner, design professional and the contractor of any compliance deficiencies and/or any obvious code related deficiencies. All code interpretations and code enforcement requirements shall be determined by OSF. Copies of inspection reports shall be provided to the owner's representative, and the design professional, within five (5) business days of each inspection. An inspection log reflecting all inspection reports, including all deficiency corrections, shall also be maintained at the construction site. Reports shall be made available to OSF on request.

#### **SECTION 904—INSPECTION DURING CONSTRUCTION**

**904.1**—Before basic construction is concealed by ceilings, the OSF shall be notified when all fire protection and fire stopping is complete and ready for an inspection. This inspection will be basically concerned with compliance with all fire and building construction codes. It is the responsibility of the primary design professional to make certain these items are ready for inspection prior to calling the OSF. The inspections shall be made jointly by the primary design professional, the OSF, and the district.

#### **SECTION 905—REQUIREMENTS DURING CONSTRUCTION**

**905.1—Record Drawings:** These shall be maintained during the construction phase and delivered to the district at project completion. See Section 908 for details.

## **905.2.— Change Orders**

**905.2.1**—All change orders which affect adherence to codes, regulations, and/or statutes shall be forwarded by the design professional to the OSF and the agency which has jurisdiction (DHEC, DOT, etc.). If the OSF determines that the change order submittal does not properly adhere to codes, regulations, and/or statutes, the design professional shall be notified. The corrected change order shall then be resubmitted to the OSF.

**905.2.2**—The accuracy of change orders as to arithmetic and general equity is the responsibility of the district and design professional, and the OSF will not review these aspects of the change order.

## **SECTION 906—OCCUPANCY INSPECTION AT SUBSTANTIAL COMPLETION**

**906.1**—Inspection by the OSF shall be required as follows:

**906.1.1**—For all student related facilities if new construction is involved.

**906.1.2**—For all non student related facilities if new construction is involved, unless of minor scope, in which case inspection shall be optional with the OSF unless specifically requested by the district.

**906.1.3**—Inspection of renovation projects (both student and non student related) where no new construction is involved shall be optional with the OSF, depending on size and complexity of the project, unless inspection is specifically requested by the district.

**906.1.4**—Inspections by specialty manufacturers’ representatives for folding bleachers, fire extinguishing systems, communication systems, lightning protection systems, and such should be made before inspection is requested of the OSF and in all cases shall be made before occupancy.

**906.1.5**—In case of hardship, but only if the design professional and general contractor both concur, the district may place furnishings and equipment in buildings before inspection by the OSF.

## **906.2—Inspection Procedures**

**906.2.1**—When the design professional can certify substantial completion of the project or portion of project that is ready for occupancy (see Section 907 for “conditions of occupancy”), he shall, with the concurrence of the school district, request an occupancy inspection by the OSF. The OSF must receive Form F-4 24 hours prior to inspection date.

**906.2.2**—When the OSF receives a request for an occupancy inspection, it shall coordinate the inspection with the Fire Marshal’s Office, and establish a date and time for the inspection.

**906.2.3**—The design professional or his engineers shall also request permission to put the water and sewer services into use from the District Director of Environmental Quality Control of DHEC. Water test approval should be received before request for DHEC’s inspection is made.

**906.2.4**—The water system shall be disinfected for 24 hours and two consecutive samples taken 24 hours apart by an approved independent testing laboratory. Both tests shall show freedom from bacteria as set forth by DHEC. Approval by DHEC for putting water and sewer services into use shall be obtained before occupancy, and it is recommended that such approval be obtained before occupancy inspection by the OSF is scheduled (See Section 10).

~~906.2.5~~—Primarily, the OSF will inspect “life safety” systems and features such as fire walls, fire doors, hardware, and the like. Inspecting for general adherence to other specifics of the plans and specifications shall fall within the responsibility of the design professional.

~~906.2.6~~—Upon completion of inspection, the OSF will render a contingent approval or withhold approval. Withholding of approval would mean further corrective action on non-complying items, and reinspection if necessary.

### **906.3—Administrative Records at Substantial Completion**

~~906.3.1~~—A copy of Form F4, Certificate of Readiness for the OSF Occupancy Inspection shall be transmitted by the design professional to the OSF and to the district at substantial completion.

## **SECTION 907—BEFORE OCCUPANCY**

~~907.1~~—Occupancy means that the facility is complete and ready for students and faculty to use as intended and that **all** construction operations required for code compliance have been completed. Before occupancy of a building is permitted, the following conditions shall be met:

~~907.1.1~~—The building or portion of the building to be occupied shall be substantially complete. Substantial completion means that all building systems and life safety requirements have been physically checked out **BY THE ARCHITECT** and they are acceptable and/or function properly. The architect shall establish the date of substantial completion in concurrence with the district and at that time shall submit a Certification of Substantially Completed Project as required under Section 906.3 of this document.

~~907.1.2~~—All “life safety” systems shall be completely operational, including the fire alarm, exit lights, emergency power, emergency lighting, fire extinguishing and smoke detection systems, and portable fire extinguishers. All firewalls and fire-rated walls shall be completely sealed and also identified in concealed areas. Fire doors, dampers, and access doors shall be in place and properly installed. All areas of the building and site shall be free of any potential hazard, and no means of egress or pathway shall be blocked or compromised in any manner.

~~907.1.3~~—The design professional or his engineer shall have approval from the District Director, Environmental Quality Control of DHEC, to put the water and sewer service into use and approval from the local DHEC food sanitarian to put the food service facilities into use.

~~907.1.4~~—Occupancy approval shall have been already requested by the design professional from the OSF and approval rendered by the OSF.

~~907.1.5~~—Final occupancy approval will not be granted until Form F5 “Building Square Foot Cost,” information has been submitted to the OSF. Form F5 can be found in Division 13 of this document.

~~907.1.6~~—If multiple occupancy inspections are required due to deficiencies, the OSF will charge the design professional for the cost of additional services, including time and mileage costs.

## **SECTION 908—PROJECT COMPLETION**

~~908.1~~—The inspection for final completion (after the occupancy inspection by the OSF) of minor deficiencies noted during the OSF inspection shall be the responsibility of the design

professional and the OSF will be available to make another inspection only when specifically requested by the design professional or district. A final inspection may be desirable or necessary when size or "occupancy need" has required several partial occupancy inspections.

**908.2**— If it is necessary to occupy the building before final completion has been declared by the design professional, it shall only be occupied with specific OSF approval and all aspects of safety shall be strictly enforced, such as separating occupants from continuing construction operations. In particular exits, exit doors, exit access corridors, and a clear path away from the building shall be maintained entirely free of scaffolding, storage of materials, or any other obstructions that would impede emergency evacuation of the building.

## **SECTION 909—RECORD DRAWINGS**

**909.1**— The design professional is required to specify that the general contractor shall be responsible for making, and shall have his applicable subcontractors make a careful record of the following during construction operations:

**909.1.1**— All approved changes from the contract drawings during the course of the job, including accurate dimensions where applicable:

**909.1.2**— Accurate dimensions locating all below grade outside utilities (whether changed or not) with reference to permanent above grade objects:

**909.1.3**— The responsibilities relating to plumbing, mechanical, and electrical in this regard is set forth under Divisions 10, 11 and 12:

**909.2**— At the completion of the work, the design professional shall furnish, at no cost to the general contractor, one unused set of drawings which shall be divided among the general contractor and the plumbing, mechanical, and electrical subcontractors, and on this set of drawings those parties shall record neatly with red ink all above mentioned changes. The general contractor shall reassemble the drawings and deliver them to the design professional.

**909.3**— The red line changes on the above drawings shall be reviewed by the design professional and his appropriate engineers, and when these drawings are approved, the design professional shall plainly mark them as "record prints" and then deliver them to the district for filing.

**909.4**— When relevant, the design professional shall specify that the construction manager assumes the duties in regard to record drawings normally required of the general contractor, and the construction manager shall require that each individual contractor be responsible for making a record of all changes under his contract.

**DIVISION 13**

**FORMS**

**F1 REQUEST FOR WAIVER FROM USE OF PROFESSIONAL SERVICES**

**F2 APPLICATION FOR APPROVAL OF PROPERTY ACQUISITION**

**F2A EVALUATION FOR APPROVAL OF PROPERTY ACQUISITION**

**F3 BUILDING CODE ANALYSIS FORM**

**F4 CERTIFICATION OF READINESS FOR OSF OCCUPANCY INSPECTION**

**F5 SQUARE FOOT COST INFORMATION**

**F6 ~~SCHOOL TRANSPORTATION~~PRELIMINARY INFORMATION FORM**

**F7 ~~PRELIMINARY SCHOOL BUS TRANSPORTATION INFORMATION FORM~~**